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THE HISTORY OF THE LANGUAGES OF POLYNESIA, MELANESIA, INDONESIA, AND MICRONESIA, AND THE SCOPE OF THESE LANGUAGES ARE DESCRIBED. (THIS REPORT IS PART OF A SERIES, ED 010 350 TO ED 010 367.) (JK)

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INDO-PACIFIC FASCICLE ONE

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N. B.

Exigencies of manufacture do not permit us to distribute the remaining fascicles on Sino-Tibetan in the order in which the manuscripts for the fascicles were prepared. Hence, Sino-Tibetan Fascicle One is not now followed by Sino-Tibetan Fascicle Two, as originally planned. However, rather than delay all publication of the Languages of the World Fascicles, this issue of Anthropological Linguistics presents Indo-Pacific Fascicle One.

The remaining Sino-Tibetan fascicles will appear in future issues of Anthropological Linguistics.

LANGUAGES OF THE WORLD:
INDO-PACIFIC FASCICLE ONE

C. F. and F. M. Voegelin
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1.0. Scope of the Indo-Pacific Languages
1.1. History of Austronesian (Malayo-Polynesian) research
1.2. Polynesia
1.3. Melanesia
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1.5. Micronesia

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SCOPE OF THE INDO-PACIFIC LANGUAGES

1.0. The Indo-Pacific area is sometimes taken as a natural area in biology, but not in anthropology or linguistics.* Though there is a German atlas concerned with the Indo-Pacific languages, the languages spoken on the peninsulas and islands of the Pacific Basin and Indian Oceans are not generally regarded as having historical unity; their genetic affiliations are certainly diverse. When linguistic affiliations of languages of this geographic area do not point to the Pacific, but in the opposite direction (toward Eurasia), they are reserved for discussion in other fascicles than those devoted to Indo-Pacific languages. Affiliations of Japanese and Korean, for example, are sought in Uralic and Altaic; affiliations of Indic and Iranian languages are known to be with the Indo-European family. On the other hand, affiliations of Dravidian and Munda, for example, have been sought in Southeast Asia, and they are accordingly included in the scope of Indo-Pacific languages. So also are aboriginal languages that are found geographically in the Indo-Pacific area, but exist without known or suspected relatives there or elsewhere--those of the Andaman Islands, of Australia, and most of those of New Guinea.

This condition of zero affiliation does not extend to Australia itself nor to New Guinea itself. Virtually every language family in Australia is related to ever other in Australia in an intricate net-work of what might be called phylum linguistics. As New Guinea languages are being discovered and described, it appears that they are indeed as numerous and as mutually unintelligible as was anticipated from earlier inadequate samples but that, rather surprisingly, they are related to each other in a small number of New Guinea language families. These families, however, are not necessarily (perhaps not even remotely) related to each other in New Guinea, or to Papuan languages on other Western Pacific islands.

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*Since writing the above, we have found that Greenberg is cited as having used the term 'Indo-Pacific' for a phylum to include mainly Papuan and Australian-Tasmanian (George P. Murdock, Ethnology 3.123, 1964); this is of course not to be confused with our areal linguistic use of Indo-Pacific for languages spoken from India to the Pacific.

The picture that emerges in a linguistic view of the genetic relationships of Indo-Pacific languages is that not only on the mainland, but on a dozen islands in these oceans and bays and surrounding seas, including two of the largest islands in the Pacific, Australia and New Guinea, languages are spoken that are unrelated both to the geographically distant languages in the whole area, and to the geographically surrounding languages. Suppose that the Indo-Pacific area were being mapped linguistically; suppose that regions in which Northwest Pacific languages were spoken, as Japanese and Korean, were left uncolored; suppose that the area extending from East Asia to Southeast Asia to South Asia in which Sino-Tibetan and Dravidian and Indo-European languages were spoken were also left uncolored; suppose, finally, that the large islands of Australia and Tasmania and most parts of New Guinea as well as all or most of some dozen smaller islands were also left uncolored, but that the rest of the Indo-Pacific area were colored. All the colored parts of the Indo-Pacific area would then represent areas in which languages are spoken that are related to each other, whether in the sense of a language family, or of a language phylum.

The geographic range of languages that are related to each other in the Indo-Pacific area is amazing. It extends from the island of Madagascar in the Indian Ocean (separated from the African mainland by the Mozambique Channel) where Malagasy is spoken, up to and including the celebrated Polynesian triangle bounded by Hawaii, New Zealand and Easter Island. The eastern point of this triangle is much closer to the South American mainland (Chile) than is the side of the triangle facing the Asian mainland—the western side, that which extends from Hawaii in the north and crosses the International Date Line to the west before it reaches New Zealand in the south. The area from this Polynesian triangle (in the Pacific) to Madagascar (in the Indian Ocean), extends more than half way around the world; in it there are many islands whose inhabitants speak languages that are genetically related not only to those spoken in Polynesia and Madagascar but also to languages whose speakers remained on the mainland in Southeast Asia, possibly Vietnamese and related languages, and languages of the Mon-Khmer family, but certainly to languages like Cham which belongs to a language family that is generally called 'Malayo-Polynesian' in the anthropology literature (but 'Austronesian' in the linguistic literature). On our imaginary map we would indicate by different colors the different branches of the Austronesian family that are found on the mainland of Southeast Asia and as far west as the shores of Africa and so far east as to be within outrigger canoe distance of South America.

The map would show huge areas of solid color, as one color for the entire Polynesian triangle. It would show this color interspersed with other colors, representing other branches of the Austronesian family, in the area west of the Polynesian triangle. There would be little that was colored in South Asia, even less in East Asia, but a surprising sprinkle of colored parts in Southeast Asia, representing Austronesian languages ('remnants'?) that did not join their linguistic relatives who ventured into the Pacific islands in earlier periods of migration. The Western Pacific would appear on the map to alternate between uncolored and colored islands, the latter representing Austronesian languages which are often supposed to have been influenced by unrelated neighbors in sound patterns, in lexical resources, or even in sentence profiles; and possibly, vice versa. This kind of non-genetic reshaping influence may have begun on the mainland, before migrations began; and written documents suggest some continuation of such influence into historical times.

In a sense, then, the Indo-Pacific area is relevant as a frame of reference in areal linguistics, which can be investigated only after the genetic relationships of an area are determined. Languages that are not genetically related but still show similarities are the central concern of areal linguistics: the similarities may reflect either parallel typological development, or contact and borrowing. Opportunity for the latter was especially rich in the Indo-Pacific area. For example, the early influence of Hindu culture out of India extended not only to many Sino-Tibetan languages but also to the many Austronesian languages on the mainland and on the islands off Southeast Asia. Since Bali was not subsequently converted to Islam, the Hindu influence would be expected to be more marked there than in Java to the west of Bali; and so it is, culturally — but not linguistically.

Non-genetic impulses shaping languages in sound or sentence profile are always masked; they are only now beginning to be studied. Word borrowing is the least masked, and the most studied so far among Indo-Pacific languages.

But continuity of the ancestral vocabulary — in contrast to borrowing— remains the surest guide in establishing, by reconstruction, genetic relationships—a language family or language phylum. In addition to its interest for diffusion (areal linguistics), the Indo-Pacific is chiefly interesting for containing one of the most far-flung language families in the world. It is the languages of the Austronesian family that dominate the colored parts of our imaginary map of the Indo-Pacific; only a few other smaller families that are remotely related to it and to each other would also be colored, by virtue of belonging to the same phylum rather than to the Malayo-Polynesian family.

Austronesian languages that belong to the family, strictly speaking, are found on the mainland only in Southeast Asia. Otherwise they are spoken on islands as distant as Madagascar and as close to Singapore as Sumatra. From Sumatra they are spoken beyond the Sunda Channel, in Java and Bali and the Lesser Sundas, on the island chain extending eastward to New Guinea. North of the Java Sea and the Banda Sea—between western New Guinea and Singapore—Austronesian languages are spoken on the smaller islands east and south of the Molucca Sea, and in Celebes and in Borneo. North of Celebes and Borneo, they are not only spoken on all the Philippine Islands, from Mindanao to Luzon, but are also on some northern islands of the South China Sea, as the aboriginal languages of Taiwan called Formosan. There may also be Austronesian speakers on the island of Hainan (not to be confused with the speakers of Li, a Kam-Thai language).

Most but not all languages in that part of the western Pacific that is called Melanesia belong to the Austronesian family; languages of this family are also spoken along some coastal parts of New Guinea. Some Melanesian islands north of the Coral Sea are scattered between New Guinea and that part of the Polynesian triangle which runs just west of the Ellice Islands. Other so-called Melanesian islands are scattered east and south of the Coral Sea--including the Banks, New Hebrides, New Caledonia, the Loyalty Islands, and Fiji--between Australia and that part of the Polynesian triangle which runs far west of Samoa and immediately west of Tonga.

The Micronesian islands are bounded on the east by the Polynesian triangle, on the west by the Philippines, and on the south by New Guinea and the Melanesian islands. In general, the areas listed above are culture areas rather than linguistic areas. Only for two of these areas--Micronesia and the Polynesian triangle--can it be said that all the languages spoken in them belonged exclusively to the Austronesian family when Europeans first arrived.

It is this widespread Austronesian language family that reflects the last major migrations of Indo-Pacific languages. Some languages in the Indo-Pacific area that are not related in a language family sense, may still have genetic relations with the Austronesian family by virtue of remote or much earlier connections among parent languages. When two language families (rather than languages or branches in one family) are connected or related in this way, they are said to belong to the same phylum. The evidence for bringing language families together in the same phylum is naturally less dense than the evidence for bringing languages together in the same family. The sparse evidence for connecting the Austronesian family with other language families makes it possible to seriously doubt or reject the proposed connection. But if the work behind linguistic phylum reconstructions were based on fuller information, the resulting reconstruction would be a language family rather than a phylum.

Every twenty years or so, in this century, additional language families in South Asia and Southeast Asia have been proposed as remote relatives of the Austronesian family, under a new cover term. These cover terms connecting two or more families are here classified as one or another phylum, even though the label 'phylum' is not given in our source.

In 1906, Schmidt set up his Austric phylum to relate the Mon-Khmer family (spoken in Vietnam and Cambodia) and the Munda family of India, as well as his other 'Austro-Asiatic' languages, to the Austronesian family.

In the 1924 edition of Meillet and Cohen's Les langues du monde, Przyluski extended Schmidt's Austric phylum be relating to Austronesian not only the Munda family and the Mon-Khmer family, but also Vietnamese and Cham. But Vietnamese is supposed by some to be a member of the Kam-Thai family (Maspero), and by others to be a member of the Mon-Khmer family (Haudricourt). The argument is based both on linguistic area and comparative method considerations. If the latter can attest that Vietnamese is a divergent member of the Mon-Khmer family, then they would not be in conflict with linguistic area considerations which show the influence of Thai and Cantonese tone patterns on Vietnamese. Until fuller descriptions of Vietnamese and Mon-Khmer languages permit more comparison in depth, the chief interest of the comparison remains a linguistic area one of finding typological similarities and similarities in which the donor language can be distinguished from the borrowing language.

In 1942, Benedict included the Kam-Thai family and the Austronesian family as well as Vietnamese and tentatively Miao-Yao in one phylum, for reasons similar to the ones encountered above. It was, according to Benedict, linguistic area considerations that led previous scholars to place the Kam-Thai family, with the Maio-Yao family and the Chinese family, into a Sino-Tibetan phylum. Benedict's argument is that comparative method considerations suggest phylum affiliation of the Kam-Thai family with the Malayo-Polynesian family, rather than with the Chinese family. Until the comparative method considerations are given in detail, we are inclined to include the Kam-Thai family in the Sino-Tibetan phylum, because the linguistic area considerations are already visible (e.g. in a sample of sentences from various language families in our treatment of Sino-Tibetan), while the comparative method evidence is only hinted at. However, in our view, the Sino-Tibetan phylum and the phylum to which the Austronesian family and a few other language families belong will before long appear to be related as one huge macro-phylum. Hence, though not regarded as being of the same phylum, the Kam-Thai family may be regarded as being indirectly related, via a macro-phylum, to the phylum in which the Austronesian family belongs.

We need, apparently, a suggestive label for that phylum, since Schmidt's 'Austric phylum' is too narrow a term, and too much associated with the period before language family versus linguistic phylum was appreciated as a distinction which could lead to constructive synthesis by avoiding controversy over more immediate affiliations-for example, whether Munda is more closely related to Mon-Khmer than Vietnamese. The family-phylum distinction permits us to say that the relationship is distant and remote, and does not make it necessary to include Vietnamese and related languages into a language family, as Mon-Khmer, but permits us to say that the well established Munda family, the Mon-Khmer family, Vietnamese and the well established Austronesian family, including Cham, may all be related in one language phylum.

Yet any suggestive label for such a phylum is apt to be premature, since such a label would be used while work is under way establishing the reality of what is being labelled. Rather than a specific label, a frankly programmatic listing of language families and phyla that are under consideration as members of a general Macro-Phylum could be given in parentheses. After re-examination, a given family (e.g. Munda) might be removed from the parentheses, or another family (e.g. Dravidian) might be included in the parentheses which states no more than programmatic scope of an enormous Macro-Phylum (Austronesian, Mon-Khmer, Vietnamese, Munda, and Sino-Tibetan).

Recent work in Indo-Pacific languages is less concerned with such ultimate relationships among language families (phylum linguistics), however, than it is with finding ways to attest the major branches of each of the constituent families. The problem may be simple for some families, as Japanese-Okinawan in the northwest, or as in the case of the Munda family in South Asia. It is enormously complex in the case of other families in the Indo-Pacific, and nowhere more complex than in the case of the Austronesian family. The seeming simplicity of the four traditional branches — Polynesia, Melanesia, Indonesia, and Micronesia — has undergone drastic revision and reconsideration, as is indicated in the historical stretch which follows (1.1). The central area among the four traditional areas has shrunk, and many languages in the Melanesian culture area are recognized as being Polynesian in one sense or another. Polynesia has expanded linguistically, and so has Indonesia; but it was long ago recognized that some of the languages spoken on Micronesian islands were Indonesian in linguistic type and lexicon.

The work which permits this revision — the linguistic expansion of Polynesia into Melanesia and of Indonesia into Micronesia — is not restricted to Austronesian languages in any exclusive way. The work is done with an increased attention to and awareness of the so-called Papuan languages spoken in the very center of the wide area in which Austronesian languages are distributed—namely, eastern Indonesia, New Guinea, and Melanesia. The fact, regretted by some, is that these Papuan languages are defined negatively: a language in this part of the world is identified as a Papuan language only if it is not genetically a member of the Austronesian family. Negative positions concerned with linguistic relationships can never be stated with supporting evidence. That is to say, it is possible to cite actual evidence for the support of the genetic relation among languages within a family, or families within a phylum, but it is not possible to cite any actual evidence for their non-relationship. Hence, in the case of Papuan languages, where evidence in support of genetic relationship for all is lacking so far, it is always possible that such support will turn up in future research. Indeed, Joseph Greenberg has announced at a scientific meeting in 1961 (George Grace, personal communication) that he has already observed such evidence which will serve to attest the genetic relationship of all Papuan languages in one macro-phylum.

HISTORY OF AUSTRONESIAN (MALAYO-POLYNESIAN) RESEARCH

1.1. Two labels are in current usage for the language family that is distributed from the eastern side of the Pacific ocean to the western extreme of the Indian Ocean: (a) Malayo-Polynesian and (b) Austronesian. As early as 1836, it was known that Malay was related to the Polynesian languages. When Wilhelm von Humboldt used term (a), he used it to indicate at least this much, before it became apparent that all Micronesian languages, and some of the languages in Melanesia also belonged to this language family, while others did not. Most languages in New Guinea are not Austronesian and many languages in the Melanesian islands are not. Those languages in Melanesia which are not included in the Austronesian family have come to be called Papuan, but without committent as to what linguistic relationship exists among any pair of Papuan languages; perhaps none, in the case of some pairs. Hence, Papuan is in effect a cover term for languages spoken in Melanesia — including New Guinea — that are affiliated with each other (in most cases at least) but are not affiliated with the family called either (a) Malayo-Polynesian or (b) Austronesian. Term (b) seems to be preferred by linguists, as a kind of symbol of active participation in Austronesian research, much as Americanists who were actively engaged in Algonquian work (at the time of Bloomfield) spelled Algonquian that way, while anthropologists followed a simpler spelling (Algonkin or Algonkian).

The use of 'Oceania' as an areal term is somewhat parallel to the convenient but negative meaning of Papuan. In its negative sense, 'Oceania' excludes Indonesia; and in its narrowest usage, also excludes the Australian island-continent which is geographically under New Guinea as well as under Indonesia. In its most restricted usage, the Oceania area — from west to east — covers New Guinea, Melanesia, the Polynesian triangle, and Micronesia.

In the last two sub-areas mentioned here--Polynesia and Micronesia--languages of the Austronesian family were spoken exclusively before the arrival of Europeans. In New Guinea and Melanesia, the Papuan languages that do not belong to this family are also included in the Oceania area. On the one hand, Oceania is not always extended to include Australia where, to be sure, the aboriginal languages are not Austronesian. On the other hand, Indonesia is also not always included in 'Oceania', though in Indonesia most languages surely belong to the Austronesian family; a few do not, as languages of North Halmahera; of Portuguese Timor and of Alor, in the Lesser Sunda islands. 'Oceania' is certainly not used as a cover term to include the island off Africa (Madagascar) where an Austronesian language is spoken. A much less restricted areal term than 'Oceania' (such as our 'Indo-Pacific') is called for to do justice to the distribution of languages in the Austronesian family--not to mention such remotely related language families as Mon-Khmer in Southeast Asia and Munda in India which need to be re-examined in reconstructed parental form for their phylum affiliations with Proto Austronesian.

Oceania is used in two senses: (1) as an areal term, and (2) as a linguistic branch name (Oceanic), just as the names for the traditional branches of the Austronesian family are being found to be weak (1) as branch terms, though useful (2) as areal terms. But neither as an areal term nor as a term for one of two bifurcating branches of the Austronesian family (Indonesian and Oceanic), can 'Oceania' or 'Oceanic' be understood as a synonymous or redundant way of indicating the Pacific islands--uncounted thousands altogether (though seven thousand have been counted for the Philippines) spread over a watery expanse covering three million square miles. As an areal term 'Oceania' is synonymous neither with Pacific islands nor with Southeast Asia. The latter is defined as including not only the mainland part of southeast Asia but also Indonesia. Oceania means all the rest of the South Pacific islands, or most of them, depending on whether or not the continental island of Australia is included in all the rest.

In these terms and in this context, the following consultants who guided us were concerned largely with Oceania, and with Indonesia in its linguistic sense (i.e. not only with languages of Indonesia as a nation and of national Malaysia, and of the Vietnam nation, but also with north Indonesian languages centering in the Philippines): Doris and David Blood, Denzel Carr, Samuel H. Elbert, George Grace, Howard McKaughan, Fred K. Meinecke, Albert J. Schutz, Donald Topping, and E. M. Uhlenbeck. At this juncture, the principal investigators as well as the consultants were concerned with languages in the Austronesian family rather than with Papuan languages.

The discovery of the linguistic connection between Malay and Polynesia was made two centuries ago, after the voyages of Captain Cook and his scientific associates. English speaking scholars thereafter centered their descriptive and comparative work in the Polynesian-Melanesian islands, as did French scholars, while Germanic speaking scholars, including especially the Dutch, took Indonesia as their point of departure. It is perhaps this curious division of labor (unfortunate, since neither side took too seriously the contributions of the other) that accounts for the otherwise arbitrary term 'Oceania' being widely accepted and making sense to those who use it in the Pacific world. It permitted the English speaking workers to say in one word that their field of research was Oceania; and that what was formerly the Dutch East Indies is not part of Oceania. New Guinea, which seems pivotal to us today, seemed yesterday to be an island of marginal interest (the eastern margin of Dutch interest and the western margin of English interest).

The Micronesian islands were a very silent part of Oceania when they were occupied by the Japanese between the two world wars, but the languages spoken in these little islands were once assumed to constitute the Micronesian branch of the Austronesian family.

Before the first world war, a great variety of Melanesian languages were sampled; and the Melanesian branch of the Austronesian family bristled with problems from the start. Resolutions of the difficulties encountered were expected from sub-stratum and pidginization theories to the effect that Melanesian languages were proper Austronesian languages until the speakers of them (in the migratory period) met with and intermarried with speakers of Papuan languages on the shores of New Guinea and on many islands of Melanesia. Hence, it was argued, present day offspring from a period dating back more than one millenium speak languages in which the Papuan substrata are occasionally observable; or more than occasionally so in the case of languages that are more mixed, in the sense of being Austronesian pidginizations or rather creolizations of Papuan languages.

The sampling of languages before the second world war was done by many different workers, as Milner (1963) points out in his survey of Oceanic linguistics — by such missionaries as Fox, Codrington, Ivens, Hazelwood, Churchward; by an occasional wandering scholar (Dempwolff), or once in a lifetime expedition scholar (Ray, Friederici); and by scholars who never visited the Pacific islands (Kern, Schmidt). Javanese could boast of an ancient literature, but the writing for most of the languages was devised by missionaries over a century ago; in some cases modern linguists can find no contrastive sounds in the language (e.g. Fijian) that the early missionaries failed to distinguish. Formerly preliterate peoples in Oceania have been literate for over a century now; and when they travel to other islands today, they write home in their native language. For anyone accustomed to working with American Indians who has not taken a century's literacy for granted, it comes as a great surprise to have one's casual informants — Tonga speakers in our case — be interested in writing down their own language to save us the trouble of recording their utterances.

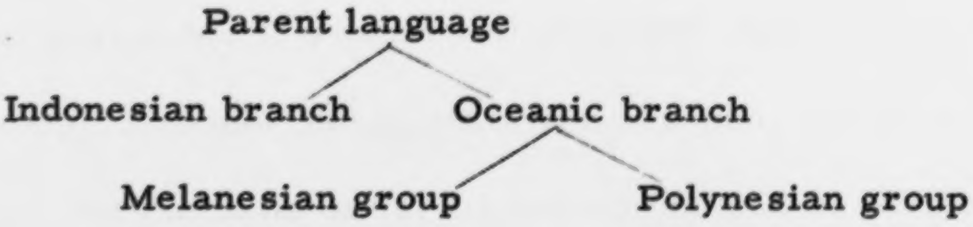
The early sampling of languages was sporadic in Oceania but was tantamount to a national enterprise in Indonesia, since as Milner (1963) says (p. 65), "In Holland the wealth of material available in Indonesia occupied all but a few linguists. In Germany interest in Oceanic languages dwindled between the two world wars while in Great Britain and France these studies attracted one or two scholars in each generation." Just before the second world war, the Austronesian family was firmly established by Dempwolff

(1934-39)—so firmly that only a few attempts at revision of Dempwolff's reconstructions have been made, notably by Dyen (1947, 1951, 1953).

Changes in emphasis since the last world war include awakening of research interest in the Indonesian branch of Austronesian by Indonesian nationals who have received graduate training at universities in the United States and elsewhere; and new academic interest, beside continuing missionary interest, in many languages on the 'Oceanic' side of the Austronesian family, as well as in Papuan languages. New Guinea is no longer _terra incognito_ linguistically. This does not mean that every one of the New Guinea languages is now under investigation, for there are probably more than 500 different languages spoken there; it does mean that well trained investigators from universities and from the Summer Institute of Linguistics have had enough contact with different languages to realize that there is probably greater linguistic diversity among the two or three million people in New Guinea than in any other area of comparable size and population in the world. But only a sample of these hundreds of languages are under investigation. Specific workers are listed, together with the languages of their concern, in following chapters.

In the history of Austronesian work, no one objects when it is proposed that the parent language of this family be regarded as related to the parent language of another language family spoken on the Asian mainland (as Kham-Thai or Mon-Khmer), even if the proposed phylum is extended to India to include the Munda language family. Nor has there been any controversy over the reconstructability of the Proto language that may be called either Malayo-Polynesian or Austronesian or—for short here—'the parent language'. But there has been nothing but controversy over the branches of the parent language. As already mentioned, Dempwolff established the parent language; it was clearly expectable that this could be done. Controversy arose over whether Dempwolff's view of branching was too Germanic—too much centered in the Indonesian branch from which the Oceanic branch or branches were given an outside or secondary place. If so, Dempwolff would merely be reflecting the bias of the older Dutch scholars who did not regard Oceanic languages as coordinate with Indonesian languages but merely as troublesome offshoots of Indonesian—and not well studied offshoots at that. This view is explicitly attributed to Dempwolff, as well as to Kern, by Milner (1963), who asserts that Dempwolff reconstructed the parent language by exclusive consideration of languages in the Indonesian branch (p. 63); and only then, after the reconstruction, bothered to compare Oceanic languages with his reconstruction of the Indonesian branch (p. 82); and that Dempwolff's subsequent examination of Oceanic languages led to an ambiguity called Urmelaneisch which might mean that Melanesian should be distinguished from Polynesian as two of three coordinate branches (Indonesian being the third branch), or might mean that the parent language was bifurcated into two main branches (p. 83): Indonesian and Oceanic (including both Polynesian and Melanesian languages). The general impression that Dempwolff's reconstruction of the parent language was based on three languages selected from the Indonesian branch

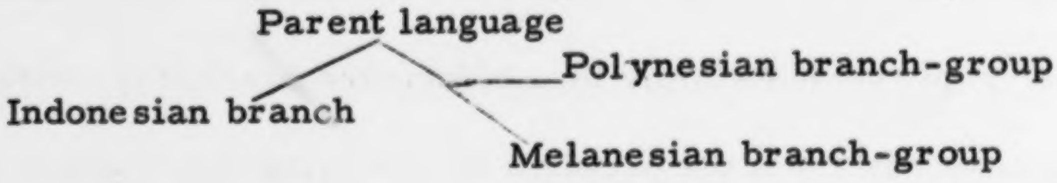
(Tagalog in the Philippines, Toba Batak in Sumatra, and Javanese in Java) is corrected by Chrétien (in Capell, 1962); this erroneous impression arose because Dempwolff did attempt, in his definitive work of 1934-38, to show that it is possible to reconstruct all the contrastive sounds of the parent language from three Indonesian languages (those cited in parentheses above), but that as early as 1920 Dempwolff had already begun to base his reconstructions on two Micronesian languages (Gilberts, Marshalls), on two Polynesian languages (Samoan, Maori), on three Melanesian languages (Mota, Fiji, and Graged, which is also spelled Gedaged), as well as on a dozen Indonesian languages. Dempwolff was at one time or another concerned with all five hundred languages or dialects in the Malayo-Polynesian family, but since he often made distinctions about branching by implication, instead of explicitly, he has to be interpreted by his successors, as by Milner (in Capell, 1962):



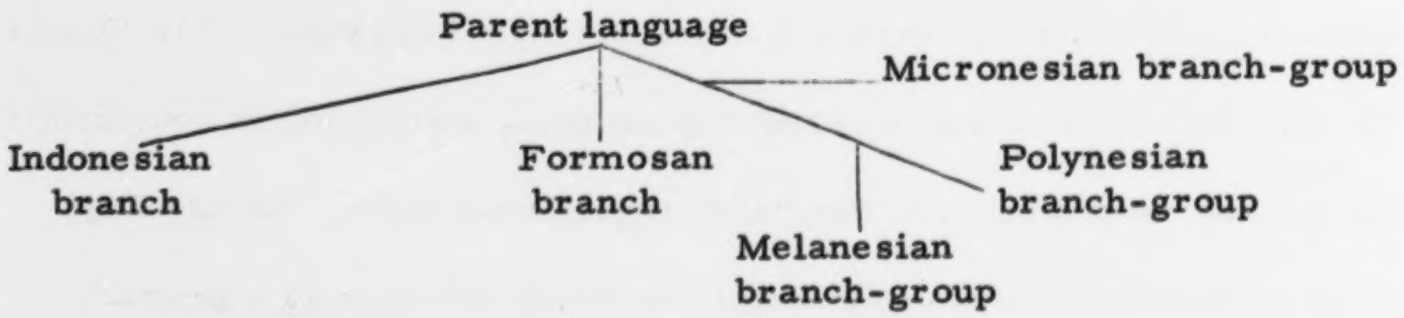
This represents the original two way split, or the simpler view of bifurcated branching in the Austronesian family—two branches, with subgroups under the Oceanic branch (but not under the Indonesian branch in Dempwolff's postulation).

The following diagram represents Grace's similar postulation (in Capell, 1962) which differs less from Dempwolff,less than it appears to in our diagram.

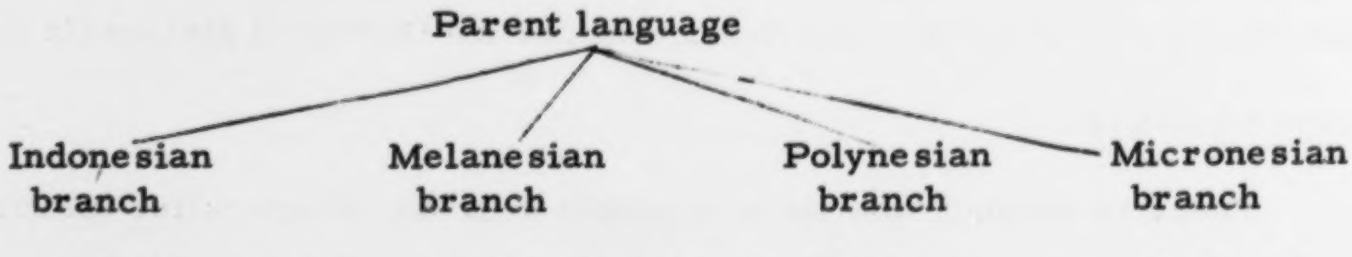
(see comment below):


Parent language
Indonesian branch
Polynesian branch-group
Melanesian branch-group

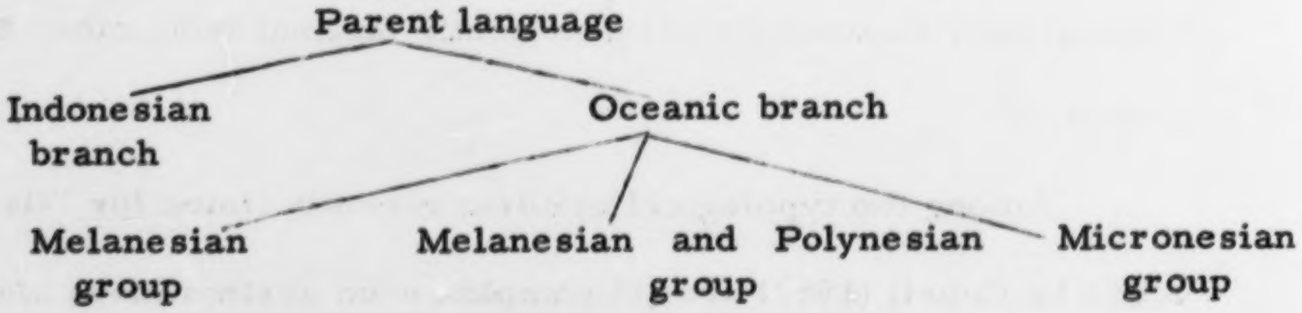
Haudricourt's postulation (in Capell, 1962) seems to suggest a three-way original split:


Parent language
Micronesian branch-group
Indonesian branch
Formosan branch
Polynesian branch-group
Melanesian branch-group

Fox's postulation (in Capell, 1962) seems to suggest a four-way original split, which is also a possible interpretation of Dempwolff:


Parent language
Indonesian branch
Melanesian branch
Polynesian branch
Micronesian branch

With Cowan's postulation (in Capell, 1962), we return to the simpler bifurcated-branching with sub-groups under the Oceanic branch (or, as Cowan prefers to call Oceanic, 'Proto-Melanesian'), also postulated by Dempwolff and Grace (see above):


Parent language
Indonesian branch
Oceanic branch
Melanesian group
Melanesian and Polynesian group
Micronesian group

Fox's four coordinate branches of the Malayo-Polynesian family represent what we have called the traditional view. One modern view is then represented simply by a bifurcated branching, with a transfer of controversy from the problem of justifying the original split to the problem of justifying the linguistic homogeneity of languages spoken in the sub-groups under the Oceanic branch; even if they cannot be justified by comparative method linguistics, they remain distinct in areal linguistics. The linguistic justification for branching is partly and properly sought for in comparative method work; in practice, it has been largely typological, but typology belongs primarily in areal linguistics, in which diffusion is a primary consideration. It is well known, for example, that infixes are found in Indonesian languages. But infixes are not confined to languages spoken in Indonesian—indeed infixes are found east of New Guinea in Melanesia (central Solomon islands).

There is divided opinion as to whether or not comparative method evidence will justify Melanesia as a genetic sub-branch of the Oceanic branch. According to Milner (1963), Schmidt, Dempwolff, Fox, Haudricourt, Dyen, Grace and Milke expect that it will, while Ray, Capell, Wurm and Cowan expect that it will not (p. 69). If not, 'Melanesian' languages will remain typologically distinct but not genetically distinct from other Malayo-Polynesian groups.

Among the typological criteria recently listed for 'Melanesian' languages by Capell (1962) are (1) complex noun system (noun classes with concord—

that is, affixes which distinguish singular, dual, paucal for few, and plural for many are affixed to pronouns and adjectives, as well as to nouns—and different sets of such affixes serve as classifiers for different classes of nouns); and (2) complex verb systems (simpler in languages that have a complex noun system); and, beside this part of speech type of typology, (3) syntactic criteria (Subject-Object-Verb as a favorite order, and much variation between modified-modifier and modifier-modified orders).

If Melanesian can be justified as a genetically distinct as opposed to a typologically distinct group in the Malayo-Polynesian family, it will be through comparative method (reconstructive) work. Grace (1959) proposed bringing together Fijian, Rotuman, and Polynesian languages, and thereby raised the hope of merging Polynesian and Melanesian languages in one genetic group rather than keeping these two traditional branches apart. Other Melanesian languages from New Britain have been added to Grace's nucleus by Goodenough (1961); and Milke proposed the term 'Proto-Oceanic' for the period before Fijian, Samoan and Eastern Polynesian languages had separated, on the basis of comparative method work which gives positive results; Milke's parallel statistical treatment of typological strata or sub-strata proposed by Capell yielded critical results (Milner, 1963, p. 83) as did Chrétien's 1956 study (p. 86).

The reconstruction of Polynesian as a genetically distinct branch in the Austronesian family is stated in the form of a family tree by Elbert (1953), but the genetic distinctness of Polynesian in the Austronesian family is questioned on typological grounds by Kähler who sees so many parallels to Polynesian characteristics in the Celebes and other parts of Indonesia that, as Milner (1963) puts it, "He therefore sees no reason for preserving the term Polynesian as a linguistic concept." (p. 86).

Modern proponents for preserving the term Micronesian as a linguistic concept are hard to find. The modern view is most clearly expressed by Izui whose opinion is cited (p. 70) by Milner (1963): "Micronesian languages do not form a homogeneous group, some, like Palau and Chamorro, being mainly Indonesian in their structure, while the remainder, including the languages of the Carolines, Marshalls and Gilberts, are mainly Melanesian with some influence from Polynesian." This is certainly one modern view, but it cannot be judged until modern linguists publish their recent analyses of Micronesian languages. The reference to what is Melanesian in Micronesian with some influence from Polynesian is surely typological, echoing Kähler (1952-55; VI: 144) who flatly asserts that "Polynesian dialects exhibit . . . the same typological structure as languages in the Indonesian areas . . . the Polynesian dialects . . . are therefore Indonesian languages." Two out of the four traditional branches have evaporated in these extreme views in which part of Micronesia is ascribed to Indonesian, and the other part to Melanesian, and all of Polynesia is ascribed to Indonesian.

These extreme views can be matched by other views equally modern but less extreme—e.g. those expressed by Matthews (1950) in respect to Micronesia on the one hand and also in respect to the other three major branches

(Polynesian, Indonesian, and Melanesian). What he terms the 'nuclear variety' of Micronesia (languages spoken in the Carolines, Marshalls, and Gilberts) cannot be treated as part of any enlarged Polynesian or Melanesian branch—or even as part of an enlarged Indonesian branch, though there are of course Indonesian type languages spoken on Micronesian islands other than the Carolines, Marshalls and Gilberts. Most insightful in Matthews' view is his recognization that interpretation varies depending on whether it is based on diachronic linguistics—which has led to 'ephemeral' as well as 'tenacious' controversy about branches of the Austronesian family—or on synchronic linguistics: "Whatever the ephemeral or the tenacious views of diachronic linguistics may be with regard to the vertical development of the various branches of Austronesian, synchronic study shows them to be, in sound and structure, four parallel and separate types, whose interrelationship seems to be due to more than the lavish diffusion of lexical elements from an Indonesian source." (p. 437).

So far as the 'four parallel and separate types' are concerned, Polynesia is the only one that has proved to be readily recognizable by having overwhelming similarities among all the languages of the area. Major branches in the Austronesian family have been set up 'by inspection' for Polynesia; minor or sub-branches have also been set up 'by inspection'—e.g. Tagalog and Cebuano (and other Bisayan dialects) and Bikol which exhibit shared innovations that distinguish this sub-branch from other sub-groups and sub-branches of the major Indonesian branch. What is common to Indonesian, however, is what continues from Proto-Austronesian times (retentions; hence Dempwolff could reconstruct Proto-Austronesian from Indonesian resources alone); what distinguishes Indonesian from other major branches is the question about which there is more than one modern view.

The lexicostatistic work of Dyen (1963) is narrowly based but most definitive within its scope. It is not at all nihilistic in respect to branches of the Austronesian languages. If the most chartered parts on the Austronesian research program lie at two extremes—the reconstructed parent language (Proto-Austronesian) on the one hand, and the smallest of small sub-groups or sub-branches on the other (as the Tagalog-Bisayan-Bikol sub-branch in the Philippines, cited above), then information of a lexicostatistic kind offers a scaffolding to build from the smallest sub-groups to successively larger or more inclusive sub-branches. But the lexicostatistic information does not distinguish in principle between diffusion of lexical elements, and retention, and shared innovation.

POLYNESIA

1.2. We begin our list of Malayo-Polynesian languages as an archaeologist might begin his description of the stratigraphy of a site: first mentioned is what is nearest to the surface—what is nearest chronologically to historic times—and all the rest of the stratigraphy may then be said to precede in time perspective. Archaeology contributes carbon 14 information for dating early but not necessarily first settlements of Polynesian islands;

glottochronology postulates calculations for estimating the time span of separation between pairs of Polynesian languages or dialects; typology promises to contribute a testable index of structural sameness and differences among groups of languages and dialects that have already been demonstrated to be genetically related by the comparative method; and genealogical traditions of colonizing ancestors can be translated into years by counting 25 years for each generation. These five kinds of data—carbon 14 from archaeology, density of shared vocabulary from lexicostatistics, typological data from structural linguistics, reflexes from reconstructions in comparative method work, and genealogical tradition from folklore—probably confirm each other more completely in Polynesia than in any other part of the Indo-Pacific area. Still, not even in Polynesia are all five kinds of data mutually confirmatory for all interpretations.

The last neolithic migration known in prehistory began its island hopping and backtracking at some undetermined time, starting from the Southeast Asian mainland, and ending in Eastern Polynesia at dates that can be ascribed with an unusual degree of confidence. Before giving dates for the times the Polynesians settled the islands, the islands themselves are listed; following Elbert (1953) in general, we often use the name of an island or island group for the name of the Polynesian language spoken on it—e.g. 'New Zealand' for the Maori language spoken in various dialects in New Zealand; 'Hawaii' for Hawaiian, a language formerly spoken in all the inhabited islands of the Hawaiian chain, but now spoken as a primary language chiefly on one little island of the Hawaiian chain (Niihau).

Polynesian languages spoken outside the Polynesian triangle are called Polynesian Outliers. Capell (1962) gives a list of 'Outlier Groups within Melanesia'. But some languages on his list, as Nukuoro and Kapingamarangi, are as far north as the Gilberts which belong to the traditional Micronesian group or branch of Malayo-Polynesian. It is true, of course, that most of the Polynesian Outliers are interspersed among Melanesian islands.

We now list the Outliers by names for fourteen of the islands or languages, and occasionally add parenthetic additions for languages or islands to give further information:

Fila-Mele (Efate, New Hebrides)
Futuna-Aniwa (New Hebrides; there is also a Futuna in western Polynesia)
Kapingamarangi (Greenwich)
Mae (New Hebrides)
Mortlocks (Taku, also spelled Takuu and Tauu)
Nukuria (also spelled Nuguria; probably close to Mortlocks linguistically)
Nukuoro (in southern Micronesia, near Kapingamarangi)
Nukumanu (probably close to Mortlocks linguistically; also called Tasman)
Ongtong Java (Luangiua, or Lord Howe)
Pileni-Matema-Nukapu-Taumako (Duffs)
Rennell-Bellona (Mugaba and Mungiki)
Sikaiana, also spelled Sikiana or Sikayana (Stewart)
Tikopia-Anuta (one language in two islands southeast of Santa Cruz)

Uvea of the Loyalties (there is also another Uvea in Western Polynesia).

These Outlier languages have been less investigated than have the languages spoken within the Polynesian triangle. Something unexpected in Polynesian was discovered by Elbert (1948): the usual oral stops, /p t k/ (as well as continuants), were contrasted with aspirated stops /p^h t^h k^h/ (and continuants) in Kapingamarangi, and a decade later Milner (1958) found the same contrast in Ellice Islands, just barely within the Polynesian triangle. Kapingamarangi lies in the southernmost part of Micronesia, on the border of Melanesia, and some seven or eight degrees of latitude north (and west) of the Ellice Islands.

The Ellice Islands lie within the Polynesian triangle, the westernmost islands of western Polynesia. Included in this western group are seven Polynesian languages or dialects listed by Elbert (1953) and Capell (1962):

Ellice
Futuna (of Western Polynesia; there is also an Outlier Futuna in New Hebrides)
Niue (east of Tonga)
Samoa
Tokelau
Tonga
Uvea (of Western Polynesia; there is also an Outlier Uvea spoken in the Loyalty islands)

Tonga is included in a special focus in western Polynesia, together with Niue, Uvea, and Futuna. It is possible to demarcate western Polynesian languages from eastern Polynesian languages, but also possible to distinguish the Tongan focus from other western Polynesian languages, and then thereafter to contrast all western Polynesian with eastern Polynesian languages or dialects.

East of Ellice and Samoa and Tonga, lie the most central of all islands in the Polynesian triangle. These are the Society Islands, including Tahiti; the Northern Cooks (Pukapuka, Manihiki, Rakahanga, and Tongareva which is also called Penrhyn)—all low islands north (and west) of the Society Islands; the Marquesas lie northeast; the other Cooks, including Rarotonga, and the neighboring Australs and the distant Rapa are mostly high islands to the south of the Society Islands. Directly east of the Society Islands and south of the Marquesas, are the Tuamotu group of coral atolls. The easternmost islands in Eastern Polynesia—east of all those already mentioned—are Mangareva (also called Gambier) and Pitcairn (where archaic English and some Tahitian is spoken) and Easter Island. The other two geographic extremes of the Polynesian triangle (Hawaii and New Zealand) belong in Eastern Polynesia also—for linguistic reasons (and for reasons of culture also, as Burrows pointed out long ago).

Eight languages or dialects from the eastern group within the Polynesian triangle are included in the lists given by Elbert (1953) and by Capell (1962):

Easter Island
Hawaii

Mangareva (east of the Australs and south of Tuamotu)

Marquesas

New Zealand (Maori)

Rarotonga

Tahiti

Tuamotu (called Pa?umotu by the Tahitians)

As cited above, these lists of languages or dialects—14 Polynesian Outliers as against 15 within the Polynesian triangle (7 western and 8 eastern) are not as coordinate as they seem to be. The lists name separate islands for the Outliers generally, but for western and eastern Polynesian, most of the names listed are for sizeable island groups in which dialects are differentiated (Samoa, Tokelau, Ellice and Tonga in the west; and Hawaii, Marquesas, New Zealand, the Cooks, Society Islands and the Tuamotus in the east).

Recent grammatical studies have appeared or are in press for Kapingamarangi by Elbert (1948); for Rennell and Bellona, also by Elbert (in press); and for Futuna and Aniwa of the New Hebrides by Capell (1960)—all Polynesian Outliers. On languages within the Polynesian triangle, there has recently appeared additional grammatical work for Maori by Biggs (1961) and by Hohepa (in press); for Cook Islands (Rarotongan) by Buse (1960); for Samoan also by Buse (1961) and by Pawley (in press); for Tongan by Churchward (1953) and by Morton (in press); and for Hawaiian by Elbert who gives grammatical information in successive and revised editions of his book Conversational

Hawaiian (1951-61) and in the preface to a dictionary.

On the whole, the contributions to Polynesian lexicography, now as in the past, exceed the contributions to Polynesian grammars both in bulk and in insight.

The Hawaiian-English Dictionary by Pukui and Elbert (1957) includes more than twenty five thousand entries, and has now been followed by an English-Hawaiian Dictionary (1964). Other big dictionaries have also recently appeared or have recently been revised—for Tongan by Churchward (1959); for Maori by Williams (1957); for Rarotonga by Savage (1962); for Rennel by Elbert (in press); for Tuamotuan by Stimson and Marshall (in press); for Samoan by Milner (in press); and for Easter Island by Fuentes (1960). In addition, though not quite a dictionary of Easter Island script (since the script is not really deciphered yet), a systematically ordered list of characters used in Easter Island writing by Barthel (1958) will certainly facilitate decipherment.

In the favorite conjectures about Easter Island writing, great antiquity is assumed in order to connect the epigraphic tradition of Mahendjo-Daro (also undeciphered), in the Indus Valley of Pakistan, with that of Easter Island. If archaeological dating is to be trusted at all, any connection of Easter Island writing with Mahendjo-Daro writing is precluded because Indus Valley culture flourished millenia ago as an outlier of the Most Ancient East, while Easter Island was first settled in 500 A. D.

We are here concerned with specific dates only in our own era. For earlier perspective, it may be assumed that man came to western Polynesia at about the time that the Homeric Greeks were abandoning a type of writing known as Mycenean Linear B, in the second millenium BC; that he began to sail on to the central part of eastern Polynesia (first to Tahiti and then to the Marquesas) at about the time the pre-Classical Greeks were beginning to adapt the Phoenician alphabet to their own language; that he had not ventured out of the Society Islands and Marquesas by the end of the first millenium B. C.

The peripheries of eastern Polynesia were settled in our era: Easter Island by 500 A. D., and the Cooks south of the Society Islands at about the same time, although the path of migration may have been from the Society Islands to the Cook Islands (and thence on to New Zealand by 900 A. D.), and from the Marquesas to Easter Island earlier than from the Marquesas to Mangareva. Hawaii may have been settled either from Tahiti or from the Marquesas somewhat earlier (or somewhat later) than 500 A. D., as may have Easter Island, if archaeological evidence (carbon 14) and lexicostatistic calculations and genealogical traditions are all three considered. In general, however, these three kinds of diverse evidence do not conflict in placing these last neolithic migrations out of central Polynesia (and into Easter Island and Mangareva, into the Cook Islands and New Zealand, and into Hawaii) between the early centuries of our era and the middle centuries of our era (circa 1000 A. D.).

This summarizes both Elbert (1953) and Emory (1963). Emory gives two sets of settlement dates for each island (p. 83), with the second set (including archaeological information) being generally a century or two earlier than the set of dates without benefit of archaeology. Elbert compares archaeological and linguistic dates with dates obtained from genealogical tradition, which turn out to be one century or a few centuries later than dates obtained from carbon 14 or glottochronology. For example, genealogical traditions would have the earliest Polynesians reach New Zealand not before 1350 A.D. while archaeology and glottochronology would date their arrival as early as 900 A.D. or a century later.

If the settlement of the Polynesian islands within the Polynesian triangle can be dated, and the colonizing island or island group for each colonized island can be determined, it should be possible to use the same kinds of evidence for saying whether the Polynesian Outliers represent remnants of larger groups of migrating Polynesians who remained behind on islands in Melanesia, as Fornander conjectured long ago, or whether the Polynesian Outliers were colonized by Polynesians backtracking from determinable colonizing islands within the Polynesian triangle, as Elbert expects in the general case for Polynesian Outliers. Much depends, probably, on the confidence one gives to genealogical traditions. Despite the folkloristic tradition that Uvea in the Loyalty islands is a colony which backtracked from Uvea in western Polynesia—a tradition recorded by Guiart (1953)—it is said by Capell (1962), that the 'language as a whole belies this'. In the New Hebrides, the Polynesian Outliers of Futuna and Aniwa may represent remnants of a much earlier migration period when the Polynesian forebears were moving through Melanesia into western Polynesia, there to remain for a millenium in a Tonganfocus (including Futuna) and in a Samoan focus before sailing on to central Polynesia and, ultimately, to the peripheries of eastern Polynesia. Capell (1960) argues that there is no linguistic support for the backtracking theory that Futuna of the Tongan focus backtracked from the Polynesian triangle to settle new colonies such as Futuna in the New Hebrides.

What kind of linguistic evidence is wanted as linguistic support? Two kinds remain to be considered: (1) that obtainable from reflexes of reconstructions in comparative method work, and (2) typological sameness and differences. The latter are also relevant to the moot question of whether many different languages are spoken in the Polynesian triangle, or whether Polynesians on the different islands speak mutually intelligible dialects (1) in western Polynesia, and (2) in eastern Polynesia (not to mention the Outliers).

The following gives the end result of the sound correspondences—those tabulated by Elbert (1953)—in terms of (1) splits, (2) mergers, (3) partial mergers. By 'split' (1), we refer to the reflexion of one phoneme in the parent language by two in the daughter language. By 'merger' (2), we refer to the reflexion of two phonemes of the parent language by a single phoneme in the daughter language. By 'partial merger' (3), we refer to a combination of split and merger in which two phonemes in the parent language are reflected either by a single phoneme and zero (loss), or by two phonemes of which one is a reflex of both the Proto language phonemes and the other is a reflex of only one of the Proto phonemes (in certain environments).

The first separation from Proto Polynesian was Proto Tongan which distinguished * /s h/, */l r/, */Oæ/. Futunan separated from Proto Tongan before *O split into /a e/. After the separation, Futunan lost *h and merged */l r/.

Next, Uvean separated after *O had split into /a o/, but before */s h/ had completely merged. After the separation, Uvean merged */l r/.

Next, Niue separated from Tongan. After the separation, Niue lost * ʔ, and partially merged */l r/.

Then, after the separation of Proto Tongan, the parent language of the remaining languages in the Polynesian triangle (and Kapingamarangi also) lost * ʔ, lost *h, and merged */l r/.

Next to separate were the western Polynesian languages (not counting languages of the Tongan focus which had already separated). They separated before */Oæ/ had split.

Then, the parent language of eastern Polynesian languages (and Kapingamarangi) began to merge */f s/, and began to split *O as well as * æ. Kapinamarangi completed the split of *O (but not of *æ), after it separated from eastern Polynesian. Maori and Rarotonga completed the split of *æ (but not of *O). After this, the split of both *O and *æ was completed in the rest of eastern Polynesia. The merger of */s f/ was completed in Kapingamarangi, Rarotonga, Hawaii, Easter Island and Mangareva. In the Marquesas, Tuamotu, Tahiti, and Maori, the merger of */f s/ was partial.

No further mergers or splits occured in Easter Island, Mangareva, or Tuamotu. But further mergers did occur in Hawaii (of */n ŋ/), in Tahiti (of */ŋ k/), and in the Marquesas where *ŋ was partially merged with */n k/, and *k was partially merged with */l r/.

The above summarizes the reflexion of the Proto Polynesian phonemes in the languages included in 'A tentative family tree for Polynesia' by Elbert (1953).

Let us consider next the typology of Polynesian sound systems. The vowel type is the same for all—a five vowel system of the 2 (FB) over N type in which Front-Back contrasts are made at high and mid tongue heights (/i u/ and /e o/), but with no contrast at low tongue-height: /a/. Long vowels (or clusters of two identical vowels) contrast with short vowels, and there are other vowel clusters (diphthongs), but no consonant clusters in Polynesia. There is some evidence of consonant clusters in some Polynesian Outliers.

The simplest dimension of the consonant system is the number of Stops, Nasals, and Fricatives that are produced at different points of articulation (linear distinctions). In the Polynesian languages in our sample, all but a few Outliers include a single liquid. There are two liquids in New Hebrides Futunan, /l/ and /r/ (as also in Fila-Mele, [illegible], Tikopia, and Mortlocks), but none in Marquesan.

All the other languages include at least one liquid (/l/ or /r/), except Marquesan which is otherwise identical in linear distinctions with some

western Polynesian languages (Tongan, Uvean, and Futunan in the Polynesian triangle):

4 Stops /p t k ʔ/;

3 Nasals /m n ŋ/;

2 Fricatives (plus) /f h/—'plus' meaning plus possible contrast by voicing of /f/—hence /v/—which is not counted as a linear distinction.

In addition to eastern Polynesian Marquesan, which almost shares this type (but is aberrant because it is the only Polynesian language without liquid), Rarotonga, also in eastern Polynesia, almost shares this type (but is aberrant in having only one fricative, /v/, and therefore making no linear distinctions among fricatives).

The consonant type 4S-3N-2F (plus), without reservations (without a single exceptional feature), is found only in the Tongan focus of western Polynesia—in Tonga, Uvea, and Futuna.

No other arrangement of linear distinctions into a given type is peculiar to any part of Polynesia proper. The most common Polynesian consonant type shows the following linear distinctions:

3 Stops

3 Nasals

2 Fricatives

These distinctions are found among the Outliers, and in Western Polynesia and in eastern Polynesia.

Two other linear distinction types differ from the common type

(1) by distinguishing two rather than three nasals (Tahitian, Hawaiian, and Ongtong Java, for example, or (2) by making more than two (three or four) rather than two linear distinctions among fricatives (Sikaiana, Nukuoro, Aniwa and Futuna of New Hebrides, Rennell, Mortlocks and Ongtong Java — all Outliers).

Kapingamarangi, an Outlier, and Ellice in western Polynesia, are peculiar in combining aspiration with stops and continuants, as a way of generating additional series of stops and continuants—rather than as a way of creating additional linear distinctions. The linear distinctions of oral stops are fewer in Hawaii, (/p k/) and in Samoa and Tahiti (/p t/) than elsewhere, but since these three languages distinguish the glottal stop from the two oral stops, they fall in line with the most common linear distinction score for stops—three altogether, however different in articulation the linear distinctions may be.

Typology does not attest genetic relationships, but it does summarize sameness and differences in areal linguistics. In the typology of Polynesian sounds, the vowels are all the same, and the consonants—from one language or dialect to the next—are almost the same. In seeking the historical connection of Polynesian to the rest of the Malayo-Polynesian family, some scholars speak of a Polynesian language (with mere dialect differences), as though there were enough sameness to warrant regarding the Polynesian branch of Malayo-Polynesian as one language, spoken in various dialects, without any language barriers between them.

The usual difficulties involved in any discussion of language barrier versus partial intelligibility is in reference to land areas, but in Polynesia the language barrier is complicated by water barriers. Where there was traditional back and forth travel between more or less neighboring islands, as between Tahiti, or the Society Islands generally, and the Tuamotus, the Tuamotu speakers learned to speak Tahitian since Tahitian is a prestige language or dialect in eastern Polynesia. If a closely related language or dialect on a neighboring island is learned in this way, does it take many months to learn, or it is 'learned' in a matter of weeks or days? It has been suggested that dialects be classified according to the number of days or weeks it takes the speaker of one to understand a speaker of the other.

If there are many vocabulary items in common, as between any pair of eastern Polynesian languages or any pair of western Polynesian languages, the impression of being able to understand is heightened because shared vocabulary is of course recognized. Ten days after the Maori speaking anthropologist, Te Rangi Hiroa (Peter Buck), arrived in Hawaii, he was able to understand what people were talking about in Hawaiian (personal communication). He would, however, have had to learn to speak Hawaiian in order to converse with monolingual Hawaiians, and this might have taken more than ten days.

If the Polynesian Outliers are 'throw-backs' in the sense of having recently backtracked from the Polynesian triangle, a language barrier between them and the island group from which they emigrated should not exist.

Sometimes it does not. Thus, a Tongan student in Hawaii was able to understand Torben Monberg when he spoke to her in the dialect of Bellona, near Rennel. As noted above, the Polynesian Outliers do not differ among each other in consonant types any more than do language or dialects within the Polynesian triangle, and all share the same vowel type. Dialects can have slightly different consonant types and still be mutually intelligible, as Aniwa and Futuna are (two Outliers in New Hebrides, the former making five linear distinctions among stops, /p t č k q/, while the latter shows the common Polynesian distinctions, /p t k/—that is, three linear distinctions among stops).

The realistic estimates of how many different languages (as opposed to dialects) are spoken in Polynesia proper range from two to twenty, not counting the number of different languages spoken in the Outliers. Such uncertainty in estimates reflects our lack of understanding of what keeps the speakers of some closely related languages separated by a language barrier, and what permits the speakers of dialects to communicate or at least learn to communicate in a matter of hours or days or, at most, within a few weeks. Sharing vocabulary, or innovations (in a comparative method sense), or sharing typological sameness, may (or may not) be more or less relevant to dialect status as opposed to separate language status.

We can readily test whether two Polynesians from distant islands speak dialects of the same language, or separate languages, even if we do not yet understand why. Systematic testing in most land areas is difficult, because some people take the trouble to learn the language of their neighbors; and some, as in Nigeria, learn politically favored languages and disavow knowledge of unpopular dialects. There may formerly have been more dialect and language learning among visiting Polynesians than there is today, when English is used as a lingua franca among students, at least. In a study of Polynesian speech communities Ward (1962) set up major, minor, and separate language boundaries on the basis of shared vocabulary and dialect distance testing. For eastern Polynesian, least intelligibility was found between Easter Island and the other islands, and between Hawaiian and the other islands in Eastern Polynesia. For Western Polynesia language boundaries were found to exist between the following separate languages: Samoa, Tonga, Uvea; and between all of these and one Outlier (Kapingamarangi, to the northwest), and the eastern Polynesian languages generally.

Another estimate that bears on the question of separate Polynesian languages is provided from an entirely different point of view by Dyen (1963). It has been observed that certain dialects, which are taken 'by inspection' to be dialects of the same language, turn out to share 70 percent or more of the basic vocabulary used by Dyen in compiling his lists. For this and other reasons, 'the language limit', as Dyen calls it, is postulated to be at least 70 percent shared vocabulary if the vocabulary is selected from a restricted basic word list of the Swadesh type; Swadesh himself sets the percentage of shared vocabulary somewhat higher before allowing 'the language limit' or estimate of mutual intelligibility among dialects of one language. Among a variety of American Indian speakers of dialects which were dubiously intelligible, it was found that a comfortable degree of understanding was reached when 75 percent of the vocabulary was shared by the speakers—in dialect distance testing cited by Elbert (1953). The chief variables are (1) whether the shared vocabulary is from a restricted list—i. e. from a basic or 'culture-free' vocabulary, or from an unrestricted vocabulary (as in our dialect distance testing); and (2) whether the cultures of the speakers are closely similar or not; and (3) whether intelligibility tested or estimated is only partial, or more closely approximates communication among speakers of the same dialect.

What Dyen gives are interpretable in terms of separate languages whenever pairs from his Polynesian lists show a shared basic vocabulary of less than 70 percent. We now give the list of twenty separate Polynesian languages from Dyen, estimated as indicated, in terms of assemblages. Thus there are ten different Polynesian languages in Western Polynesia ('West Polynesian cluster') which includes an occasional Polynesian Outlier. Tongan and Niue constitute an assemblage in which the members are closer to each other than any language outside the particular assemblage (in this case 'Hesion'); it is said that Tongan (Tonga-Uvea) and Niue languages are very close to 'the language limit'. Four other languages constitute another assemblage ('Hesion'): Ellice, Tikopia, Ongtong Java, and Mele-Fila. The other separate languages included in the 'West Polynesian cluster' are Rennell, Samoan, Pileni, and Futuna spoken in New Hebrides ('West Futuna').

In addition, seven separate languages are included in Eastern Polynesia ('East Polynesian Hesion'): Rarotongan (Rarotongan-Penrhyn includes as sub-dialects of Rarotongan the following: Mitiaro, Mauke, Atiu, Mangaia, and Aitutaki, as well as Rarotonga); Hawaiian; Easter Island; Marquesas; Tahitian; Mangareva; and the language spoken in the Tuamotu archipelago (Paumotu). Beside the ten western and the seven eastern languages listed above, there are three other separate Polynesian languages which are closely affiliated neither with the western nor the eastern assemblages: Maori, Kapingamarangi, and Nukuoro.

MELANESIA

1.3. In a perspective for Austronesian which begins with the latest arrivals of man in a given area, that area is incontroversially Polynesia (1.2, above). It would only lead to controversy to say that the areas to the west of Polynesia (Melanesia and New Guinea) were peopled in a migration period immediately preceding the further move to Polynesia; that Indonesia was peopled in the period before that; and that before any migrations to the Pacific Islands, the forebears of the Malayo-Polynesians lived on the mainland of (Southeast) Asia where some remnants remain. First, some of the seeming remnants may not be remnants at all, but Pacific Islanders who backtracked to the mainland. Secondly, there is a subtle difference between (a) saying that the Pacific Islands were peopled by men out of Asia and (b) saying that Asia was the point of departure or homeland of a language family—in the sense of being the areal point of dispersal for Austronesian

(Malayo-Polynesian) languages. Thirdly, the dispersal area for a phylum which included Proto Mon-Khmer and Proto Austronesian (for example) may have been in Southwest Asia, while the dispersal area for the Malayo-Polynesian family was in Melanesia. That is to say, after such an earlier phylum dispersal from the mainland, Proto Mon-Khmer (a single language) would have remained on the mainland, there to differentiate into the little known languages of the Mon-Khmer family, while speakers of another single language (Proto Austronesian) moved into Melanesia before differentiating into the better known languages of the Austronesian family.

In any part of the world where historical documentation is lacking, historical inference is based on the principle that the dispersal area of a given language family is that area where the modern languages still spoken are least homogeneous, while the languages in the peripheral areas to which the dialects immigrated (there to develop into separate languages) are relatively more homogeneous. Or to state the principle in more specific terms, two things will be assumed: (1) that there are fewer different languages in a peripheral area like Polynesia than in a dispersal area like Melanesia; (2) that of the fewer different languages in the peripheral area, each will be more like the other than in the dispersal area. As has already been noted (1.2, above), every Polynesian language shares the same vowel type, and the relatively few different languages in Polynesia differ little in a simple dimension for consonant types (number of linear distinctions).

Polynesia contrasts not only with Melanesia—in being more homogeneous—but with all the remaining areas in which Austronesian languages are spoken (Indonesia, including Madagascar, and Micronesia) where a great variety of both vowel and consonant types are found in each area. When different languages do happen to make the same linear distinctions in stops, they may still differ from each other in lacking contrast or making contrasts in series of stops. Some include only one series of stops (plain stops), as do Polynesian languages; some contrast plain stops with voiced stops and/or prenasalized stops and/or implosive stops and/or glottalized stops (characteristically found among western North American Indian languages, as well as in the Caucasus); and some include in their linear distinctions simultaneous labio-velar stops (rarely found in languages of the world except in Africa). Not only are there many different vowel types among Austronesian languages (other than Polynesian), but those which share the same vowel type may still differ from each other by contrasting components of tone (widespread in East and Southeast Asian languages).

The maximum Austronesian differentiation is still to be found in Melanesia rather than in the flanking areas (Polynesia to the east, Micronesia to the north, and Indonesia to the west of Melanesia).

We are not here concerned with the fact that the people in the Melanesian area often look as though their gene pool and the gene pool of the Papuans were more similar to each other than either is to the gene pools of peoples in the flanking areas. Nor do we subscribe to the older theories that Austronesian languages in Melanesia are pidginizations of Papuan languages, or mixed languages (Mischsprache) in any but an obvious or trivial sense (for pidginization): languages outside the family may well have been donors to languages within the family. The detailed investigation of borrowing is not trivial; it is the central concern of areal linguistics—diffusion of features from one unilineally developing language to another, irrespective of whether they are related or unrelated, as for example, languages in two different language families (e.g. retroflex sounds diffusing from Dravidian to Indo-European).

In a non-trivial sense, pidginization as well as the vaguer notion of mixed languages implies more than the meeting of two or more languages; it implies significantly more than linguistic continuation under diffusional influence of change (as by the additional contrasts made by retroflex sounds in all the Indo-European languages in South Asia, while retroflex sounds are found in no Indo-European languages outside of India and Pakistan). Pidginization and the notion of mixed languages implies that new languages are created beside the continuation of languages in contact. It is this non-trivial consequence of contact that is in question for Melanesia.

There is no doubt that some Austronesian languages, and some unrelated languages classified as Papuan, have been in continuing and productive contact (as have their speakers), and that diffusional influences of an areal linguistic nature took place among such languages. Nevertheless, there is considerable doubt (and certainly no direct evidence) that this areal linguistic influence created any new (mixed) languages beside the continuation of the languages in contact. The Papuan languages are discussed below, together with a discussion of the conditions for the creation of a low number of attested pidgin languages.

In this section we are concerned with the diversity of Austronesian languages in Melanesia, as are the chief summarizations of that diversity in that area—namely, von der Gabelentz (1873), Codrington (1885), Schmidt (1899), Dempwolff (1902ff), Ray (1907ff), Fox (1910ff), Ivens (1914ff), Grace (1959), Capell (1954, revised 1962), and Dyen (1963). Capell (1962) summarizes his predecessors as well as his own work and that of others on specific languages in Melanesian, whether Papuan or belonging to the Malayan-Polynesian family, while Grace and Dyen are exclusively concerned with the latter.

As already mentioned, Melanesia lies between the Coral Sea and western Polynesia on an east-west axis—as well as between the Coral Sea and Micronesia on a south-north axis—and Melanesian languages are also spoken on coastal New Guinea. The southernmost groups of islands in Melanesia are New Caledonia and the Loyalties, southeast of Fiji and directly south of New Hebrides. According to Ray, the New Caledonia-Loyalty languages are distinct from all other Malayo-Polynesian languages in Melanesia. All would be well if, for purposes of exposition, it were possible to say that this postulated distinctness of New Caledonia-Loyalty languages is characteristic of the general picture in Melanesia—though, in fact, the postulated distinctness is no longer acceptable. Suppose it were possible to say that New Caledonia-Loyalty constitutes one sub-branch among several sub-branches of Melanesian. Then the next question to arise would be, naturally, whether it were possible to justify Melanesian as an identifiable branch of the Austronesian family. No one has been able to justify Melanesian as a distinct branch. Not only do Melanesian languages differ greatly from one another in general, but some located in the east (as Fiji) have sentence profiles like Polynesian languages, while those located in the west occasionally show a structural feature that is characteristically Indonesian (e.g. infixation in the Solomons).

Still some groups of languages—generally contiguous geographically—are more like each other than they are like other languages or language groups in Melanesia.

How do they differ? This is a good point of departure for bringing order into the Melanesian chaos, and it is the point of departure chosen by Dyen (1963) who did not try to summarize all aspects of the Melanesian languages that had been considered by his predecessors, but instead made estimates based on a Swadesh-type list of two hundred words (adequate), or lacking even this, on a list of 175 to 200 words (subadequate). For short, this may be called basic vocabulary shared by pairs of Austronesian languages in Melanesia. It is based on lists which we count once for each language name, whether the name be of a language distinct from all others or of a dialect mutually intelligible with another language name cited. Counting this way, there are a dozen lists for language names in Micronesia, a score of lists for Polynesian language names (not only of names within the Polynesian triangle, but also the names of Outliers in Melanesia); in contrast, there are at least a hundred lists for non-Polynesian, non-Papuan names of languages and dialects in Melanesia and coastal New Guinea. This is suggestive, but not an adequate index of the relative diversity of Austronesian languages in the three areas named above. Languages in Micronesia differ from each other more than do languages in Polynesia, but the number of separate languages in Micronesia may be somewhat fewer than the number of separate languages in Polynesia. Both in respect to the structural differences among languages and in respect to the absolute number of different Austronesian languages, Melanesia far exceeds Polynesia and Micronesia.

One measure of diversity is the proportion of basic vocabulary shared by pairs of languages, computed in terms of the 'critical difference' which is simply the amount of difference between the lowest basic percentage of 'group' (generally a geographically contiguous group) and the highest percentage of any member of the 'group' with a language not in that particular group but in the Austronesian family. (When the critical difference ranges between 8 to 9.5 percent, the group or subgroup is called a 'genus' by Dyen (1963), but a 'subfamily' if the critical difference is 9.5 percent or greater; and still other terms — 'cluster', 'hesion', and 'linkage' — are used when the critical differences are successively lower, ranging down to less than 2.5 percent.) This measure of diversity brings certain languages together as having greater density of shared basic vocabulary among themselves than among other Austronesian languages in Melanesia. If languages brought together within any of the critical difference ranges noted in the above parenthesis may be called 'assemblages', then the following ten assemblages can be said to bring that much order into what was, before Dyen, much less orderly:

Tip cluster (on eastern tip or tail of New Guinea: 4 languages);

Uvolic cluster (on New Britain: 3 languages);

Buka subfamily (on a little island called Buka, and on Bouganville: 7 languages);

Choiseul subfamily (on the westernmost of the larger islands in the British Solomons: 4 languages);

New Georgia subfamily (on New Georgia in west British Solomons: 5 languages);

Lau subfamily (on Malaita in the central British Solomons: 2 languages);

Loyalty or Lific cluster (on Lifu islands in the Loyalties, just east of New Caledonia: 3 languages);

North New Caledonia cluster (6 languages);

South New Caledonia genus (5 languages).

Willaumez linkage (on Willaumez Peninsula of New Britain: 2 languages).

This gives a total of two score languages in ten assemblages. Note that by the evidence of shared basic vocabulary density-critical difference, the single distinctness of the New Caledonia-Loyalty languages, asserted by Ray (see above) on the basis of mixed kind of evidence and impression, is fragmented into three different assemblages (Loyalty cluster, North New Caledonia cluster, South New Caledonia genus).

Beside the two score languages in ten assemblages, Dyen (1963) lists many other Austronesian languages in Melanesia:

Ungrouped in New Guinea and Luisiade (the archipelago stretching from the tip of New Guinea toward Rennell and Bellona);

Ungrouped in the Bismark Archipelago;

Ungrouped in the Solomons;

Ungrouped in New Hebrides.

And besides the languages in the nine or ten assemblages and those ungrouped (except areally), Capell (1962) and Salzner (1960) give additional names of non-Polynesian, non-Papuan languages spoken in Melanesia. All are listed in Chapter 3, following.

This may leave the impression that after wide-mesh nets were cast to fish up information about all aspects of languages spoken in Melanesia by earlier authorities, cited above, later authorities confine themselves to work with brief word-lists which leads chiefly to a classification of languages. However, this is not so. Hasselt (1947) published a dictionary of Numfor which reflected some of the research done by G. J. Held before him. Grammatical work on specific languages, as Windesi, and comparative method work seeking to identify Melanesian as a branch of Malayo-Polynesian has been done by Cowan (1949-56). Mager (1952) has published a Gedaged-English dictionary. Dictionaries like this permit Milke (1958, 1961), Chretian (1956), and others, to base their comparative method and statistical work on a broader and more systematic base than brief word lists without benefit of etymological information. Other dictionaries and modernized revisions of older dictionaries include that for Roviana, spoken in New Georgia (Waterhouse, 1949). New grammatical work gives depth analysis of Lir(Lihir), spoken in New Ireland (Neuhaus 1954), and languages which were considered a distinct branch of Melanesian by Ray—the New Caledonia-Loyalty languages—have been reconsidered by French scholars (Leenhardt 1946, Haudricourt 1951, Lenormand 1954, Haudricourt and Hollyman 1960, Kasarhérou 1961). And, as already mentioned, these languages are divided into three different assemblages by Dyen (1963). New work in Melanesia on Polynesian Outliers has already been mentioned (1.2, above).

As more is learned of particular languages in Melanesia, additional problems arise concerned with language contacts and dialects. For example, Fijian is spoken in many dialects (Schütz, in press) of which one dialect, Bauan, has become a standard. The sample of Fiji sentences given in Chapter 3, for example, are written in this dialect, and so far as orthography is concerned, are written in the alphabet used for newspapers and books composed and read by Fijians who, accordingly, not only have a written language, but have had one for over a century. Thanks to modern grammars by Milner (1956) and Cammack (ms. Ph.D. thesis), and to excellent work in the earlier missionary grammars, especially Churchward's, Fijian is the best understood language of the Austronesian family spoken in any area other than Indonesia.

But Fijian is not the only language spoken in Fiji, and Fiji is more than a single island. There are 300 islands in the British Crown Colony of Fiji. Most of the land mass is found in Viti Levu where the capital, Suva, is located. One-third of the Fiji islands are inhabited by about 350,000 people, expected to increase to a half million within the present decade. When these figures were gathered by Cammack (1957), Fijians constituted 42.4% of the population (153,356)—fewer than the immigrating populations from India who constituted 49.1% of the population (177,247)—but more than Rotumans and other Pacific peoples recently attracted to Fiji and who constitute 2.8% of the population (10,051); more also than the 2.2% Europeans (7,938) or the 2.3% part Europeans (8,038), or the 1.2% Chinese (4,348). The majority group of Indians were imported between 1879 and 1916 to work on sugar plantations.

Another aspect or rather consequence of languages in contact is the occasional (very occasional) development of a pidgin, as Neo-Melanesian. More than one pidginization and creolization of more than one European language is discussed for Oceania in a following chapter.

INDONESIA

1.4. In a scale of increasing diversity among the traditional areas in which Austronesian languages are spoken, Polynesia would be at the bottom of the scale as the least diverse linguistically, and Melanesia would be expected to contain more diverse languages and possibly more separate languages than Indonesia.

However, in Dyen (1963) there are about one third more Malayo-Polynesian names listed for languages or dialects spoken in Indonesia than those listed for Melanesia. It is possible that those listed for Indonesia, more often than those for Melanesia, are names either for dialects of the same language, or for separate languages that are not entirely intelligible but still partially so. In both areas, of course, there are not only clusters of dialects and closely similar languages, but also entirely separate languages that differ greatly from each other.

The relatively greater proliferation of language names in Indonesia than in Melanesia may indirectly reflect the fact that more investigators, including the Dutch in colonial days, have been at work over a longer period of investigation in Indonesia than in Melanesia. Separate workers on clusters of languages or dialects in Indonesia might well segregate what would be lumped by a single worker in an analogous situation in Melanesia.

None of the workers among Austronesian languages spoken in Indonesia (whether in comparative method work or in structural typology) has been able to find clear-cut evidence for establishing an Indonesian branch within the family. Of the three sub-regions within Indonesia, two are relatively well explored linguistically (Western Indonesia centering in Sumatra and Java; and Northern Indonesia, centering in the Philippines). Specialists in Western Indonesian languages sense a general similarity in grammatical pattern and lexicon, but have more difficulty in stating the similarity in detail than do specialists in Philippine languages who are able to group various North Indonesian languages according to whether they are of the Tagalog type or of the Illocano type.

EASTERN INDONESIAN

The third sub-region within Indonesia (Eastern Indonesia, centering in the Lesser Sundas and the Moluccas)—is less well known linguistically than West Indonesia and North Indonesia. Like Melanesia, there are in Eastern Indonesia some languages that do not belong to the Austronesian family and hence (for this part of the world) may just as well be called Papuan languages. These Papuan languages of Eastern Indonesia are spoken in an area adjacent to Melanesia where all the rest of the Papuan languages are spoken. The non-Austronesian languages in Eastern Indonesia (e.g. North Halmahera in the Moluccas and Alor in the Lesser Sundas) are listed together with the remaining Papuan languages (i.e. those in Melanesia) in a chapter following the chapters on Austronesian languages, below.

Geographically, the East Indies represent a fragmentation or crumbling of Asia (hence the East Indies are included, with the peninsula mainland mass, as part of Southeast Asia). This fragmentation or crumbling of Asia peters out in Eastern Indonesia which extends toward New Guinea and Australia. Eastern Indonesia begins with Sumbawa, west of Lombok. The Lesser Sundas lie east of Lombok—Sumbawa, Sumba, Flores, Sawu, Alor, Wetar, and the largest, Timor (11,500 square miles); they extend to the Timor Sea which separates the Lesser Sundas from Australia. Celebes lies north of the Flores Sea, and west of the Molucca Sea. Between the

Molucca Sea and New Guinea in Eastern Indonesia, there is Halmahera; the Sula islands are south of Halmahera, as are other islands south of the Ceram Sea, including Ambon, Buru, and Ceram. These are often referred to collectively as the Moluccas--islands between the Molucca Sea and West New Guinea (former Dutch New Guinea) where Eastern Indonesia ends, but not abruptly so. Some Indonesian languages are spoken in coastal New Guinea. And North Halmahera, spoken in the Moluccas, is not an Indonesian language but a Papuan language which bears a relationship to the Papuan of the Bird's Head (Vogelkop Peninsula) in West New Guinea (West Irian), that was discerned by Cowan (1953-59). The boundary between Eastern Indonesia and North Indonesia is also not abrupt. And in Borneo and in much of Celebes, there are Philippine and Philippine-type languages (hence North Indonesian); other languages in Borneo are probably more like West Indonesian than Eastern Indonesian languages. But the latter are very inadequately investigated, as are the central languages of Borneo.

There is a certain unity among such languages as Malay (on the mainland), and languages of Sumatra and Borneo—though divergent exceptions occur both in Sumatra and Borneo—and languages of Java and Bali and Lombok; but this unity of West Indonesian languages is of a much lower degree than that of the Polynesian languages. The grouping together of Eastern Indonesian languages is of an entirely different nature, being geographical rather than on the basis of attested or attestable linguistic unity.

WEST INDONESIA

European and Asiatic contacts with peoples of Indonesia began in West Indonesia in historical times, not counting still older contacts with China followed by contacts with Chinese Buddhistic traders which exerted little linguistic influence in West or North Indonesia. On his way home from China, in 1292, Marco Polo stayed for awhile in Sumatra. But his visit would have had no greater influence than visits by other traders—Indians, Chinese, Arabs, and Gujerati Moslims who acted as middlemen between peoples of Europe and the Far East (from the 11th century onwards). The three major historical influences in Western Indonesia were (1) the Hindu influence which reached Sumatra and Java as early as the 1st century A.D. but experienced a florescence in the 4th century, and diffused to the southern parts of Borneo and the Celebes; (2) Islamization which started in Sumatra in the 7th century and spread over Java, and Lombok but not Bali; (3) European influence which had continuous effect from the 16th century onward. The typical Indonesian has been oversimplified as a person who, after contact with India and China, became a Moslim and sailor speaking Malay(Bahasa Indonesia) as a lingua franca. Linguistically, there is some evidence that Borneo is the prehistoric dispersal center of the many languages now spoken in Indonesia.

All three main cultural impacts in West Indonesian history left greater or lesser traces in language and writing. A bit more detail of the known history is worth recounting because this history includes evidence that there was, after colonization of the islands, contact between islands for other purposes than colonization. Inference often points to the possibility that languages in contact need not necessarily be neighboring languages; in West Indonesia, historical documents lend solid support to such inferences.

The oldest Sanskrit inscriptions, written by emmigrants from South India facing the Bay of Bengal (Coromandel Coast, Orissa, and Bengal) who had settled in the Malay Peninsula, Sumatra, Java and east Borneo, are confirmed by Chinese texts. Though this early Sanskrit literature was read only by the few, many Sanskrit words have been borrowed by many Indonesian languages. The first great Indo-Malay kingdom in Indonesia was in Sumatra (8th to 12th century, Palembang district). This Sumatra (Achin)-based kingdom once dominated not only West Indonesia (most of Java, the coast districts of Borneo, and the Batak and Minangkabau districts of Sumatra), but backtracked in its domination across the Bay of Bengal to Ceylon, and west of this Bay to Thailand and Cambodia where Mon-Khmer languages are spoken today. Modern linguists have not been unaware that Achinese, a language spoken in Sumatra, has today Mon-Khmer-like features, without always being aware that the first Indo-Malay kingdom once ruled both the Indonesian speakers of Sumatra and the Mon-Khmer speakers of Cambodia on the Asian mainland. The commercial travellers and pirates of this Indo-Malay kingdom (Sri Vijaya) traded and looted as far north as North Vietnam.

The Indo-Javanese florescence is symbolized by the famous temple of Borobudur (772 A. D.), built by Javanese rulers related by blood to the Sri Vijaya rulers of the Indo-Malay kingdom. These rulers were followed by others who dominated the kingdom of Majapahit, centering itself in the area of Surabaya until the 15th century, with traces of its former hegemony still perceptible as far away as south Formosa, western New Guinea, and the Marianas of the traditional Micronesia area, where Chamorro is spoken. Modern linguists are well aware of the fact that Chamorro has infixes, not unlike infixes of Indonesian languages. The Majapahit kingdom was centered in Java, and from there extended to the mainland north of Singapore (e.g. the Portuguese found a colony of Javanese merchants at Malacca, facing Sumatra across the Strait of Malacca—not to be confused with the Moluccas in Eastern Indonesia). The glory that was Majapahit remains a symbol of national greatness among the educated people of Java today—but only among the educated.

Islamic influence in Java coexisted with Hindu influence, until the Majapahit kingdom fell about 1520, to be replaced by the Moslim state of Demak in 1546. The diffusion of Islam to Indonesia was not only slow in general, but also indirect, in the sense that it was strained through India: it was a Hinduized Islam that finally overwhelmed Indonesia. The direct diffusional influence of Islam was, to begin with, centered in India. At the markets along the coast of India, the Arab merchants encountered two other peoples who also came to trade at the same Indian markets: Malays and

Chinese. In their huge sea-going junks, the Chinese carried Gujerati merchants or colonists, who were already converted to Islam, to Sumatra, Java, Borneo and the Philippines—before the turn of the second millenium of our era. It was not the Arabs themselves, as a people out of southwest Asia, but a Hinduized Islam culture that was borne by people out of south Asia which brought Islam into Indonesia. The early Moslim states that appeared in Sumatra in the 13th century were very small indeed. The method of infiltration appears to have been for the Islamic newcomer to marry into the families of upper class Indonesians. Then little Moslim kingdoms appeared, which were destined to grow into large sultanates that extended their influence not only to other parts of West Indonesia (though not to Bali), but also to parts of North Indonesia, as the Philippines.

The Spaniards met Islamized Indonesians when they came to the Philippines. But in consequence of the Spanish-Catholic impact, Islam became contained in the south-eastern islands of the Philippines where it remains today.

Not so in Java; the Islam impact triumphed there, as in most parts of West Indonesia, and the non-Islam Hinduized Indonesian cultures remain marginal, as in Bali.

The majority of Indonesians are proudly Islamic, make pilgrimages to Mecca if they can afford the trip, and display the appropriate symbols of Islam, as the fez type of hat. But they do not build mosques conspicuously, and appear not to see any conflict between Islam and Hindu and Indonesian cultures. The puppet show (Wayang) bears a continuity of Hindu culture, as does Indian writing (except where Arabic script is used—e. g. Minangkabau and Achin in Sumatra). The old Indonesian law (adat) often remains, especially in Sumatra, and the Mohammedan type of polygamy is rare (less than 1 percent of marriages). The Islamic acculturated impact in Indonesia, like that of its purely Hindu predecessor, was concerned with religion and political domination.

MAINLAND MALAY

In contrast, the Chinese influence in Indonesia was neither religious nor political; it was a Mongol ruler of China (Kubla Khan in 1292) who waged war against Java. The Chinese influence has left permanent traces in Indonesian lexical resources concerned with economic activities and artifacts—with the domains of trade and of handicrafts, of agriculture and fishing. Nor do these traces alone remain in Indonesia. The Overseas Chinese themselves are still there—4 or 5 million Chinese altogether. The Chinese are in fact less intruders or immigrants than they appear to be in current power politics. In linguistic perspective there is always the possibility of remote relationship, including not only the possibility of Thai but Chinese relationships with Malayo-Polynesian (Austronesian). And though the Chinese are recent comers to Malaysia, they are only somewhat more recent than the Malay who are also not aboriginal to modern mainland Malaysia which, it has been said, is a no-man's land.

Today Singapore is mainly a Chinese city.

The Indonesian Malay of the Malay Peninsula are the children of immigrants from Sumatra to a Peninsula whose aborigines include the Semang and Senoi. When the immigrants from Sumatra arrived in the Sri Vijaya period, they encountered the roaming Semang and Senoi. The early power of the Hinduized Malay was confined along the coast of the Peninsula and did not begin to spread until the 13th century, under the impact of the Islamic thrust which brought with it Indonesians (Buginese speakers) from as far away as South Celebes; there are also traces of Malay aristocracies whose forebears came from Borneo and Java, but the largest contingent of Malay on the Peninsula have their provenience in Sumatra. In the last few decades, the Malay constituted 40 to 45 percent of the population of the Malay Peninsula as a whole, and the Overseas Chinese 37 to 45 percent of the population.

When Raffles first arrived in Singapore, there were only 5,000 Chinese in residence; but before 1824 they had doubled in number, and by 1840 reached a total of 40,000. The junks continued to bring Chinese either directly from South China, or to bring Overseas Chinese who had spent some time in Manila or Brunei. But most of the Chinese immigrants landing in Singapore were destined to leave again. In the decade 1928-37, 2,800,000 Chinese landed in Malaya, but in the same decade 2,400,000 Chinese left the Peninsula, some to continue their status as Overseas Chinese in Thailand or the Dutch East Indies, but most to return to China.

The percentage of so-called British-born Chinese (Baba) increased from 31 percent in 1931 to 62 percent in 1947, and is increasing today.

Despite the fact that many Chinese born in Malaya no longer speak Chinese, they remain grouped according to their Chinese provenience. Those from Fukien (Hokkien) became tradesman after serving as plantation laborers; those from Canton are artisans, agriculturalists, miners, as well as tradesmen; some of those from Kwangtung (Hakka) are plantation workers and miners, while others (Tiechew or Teochiu) engage in all kinds of work; and those from Hainan (Hailain) are often domestics in Chinese or European families.

Besides the majority populations of Malay and Chinese, immigrants from India began arriving in the Straits settlements before 1850. Before a century had elapsed, they constituted 14 or 15 percent of the population of the Peninsula (624 thousand in 1932, 755 thousand in 1937). Many from north India settled in Singapore as shopkeepers, cattlemen, carriers; others came from South India (Tamil and Sinhalese speakers) and worked on rubber plantations; still others—the minority of Indians (31, 00) came from Pakistan (Punjabi and Sikh from the Indus River Valley) and worked as herdsmen, moneylenders, and policemen. The Chettiars from South India settled in separate communities in Malaya (as they did in the Dutch East Indies, Burma, Thailand, and Vietnam). Some Malay-born Indians, born of Tamil parents, also form groups apart; they have abandoned the caste system and the Tamil language.

SUMATRA

The density of population of the main island of Sumatra was 50 per square mile (1941), much less than that of Java. But 20th century increases in population show Sumatra to be increasing faster than Java. For the decade of 1920-30, the Sumatra population rose more than 30 percent, while the Java population rose less than 20 percent.

An example of a particular population trend is the increased prevalence of people after the 1863 introduction of quality tobacco-growing by Jacobus Nienhuys on the coast of Sumatra that is separated from the mainland by the Strait of Malacca. The coastal population rose from 160 thousand in 1863 to 1,675,000 in 1930, including relatively few Japanese (dentists, etc.) and only 11 thousand Dutch, but 193 thousand Chinese (Cantonese goldsmiths and tailors; Hakka shoemakers, tinsmiths, basket makers; Hokkain plantation workers from Fukien or Swatow).

Population trends may have been quite different in the three successive historical periods of Sumatra (Hindu or Sri Vijaya period; Arab-Gujerati or Islamic period; European or Dutch period). But in all historical periods, the languages of Sumatra were more numerous than those of Java, where only three exist. In Sumatra, on the other hand, there are numerous Batak languages or dialects, numerous Minangkabau languages or dialects, and numerous languages which are very different from each other and from Batak and from Minangkabau. The question of which language names are dialects and which are quite distinct, as languages, is especially difficult to answer for the language situation in Sumatra. In appraising this situation, we here take our point of departure from Dyen (1963) but cite, in Chapter 4, below, the language and dialect names and discussions found in Dutch and other sources.

Minangkabau may represent one language spoken in several dialects in Sumatra, or several languages. According to the restricted lexicostatistic measure applied by Dyen (1963), Minangkabau appears to be virtually a dialect of the Malay language spoken in the Malay Peninsula.

Kerintji or Kinchai is listed as a separate language by Dyen (1963). A native speaker of this language, Jakub Isman, once told us that Kinchai and the Minangkabau dialects were non-reciprocally intelligible—in the sense that a native speaker of Kinchai can understand speakers of Minangkabau dialects, but that the latter do not understand Kinchai. And it was from Isman the Dyen obtained his Kerintji list. All other sources consulted seem to regard Kerintji or Kinchai as a dialect of Minangkabau.

Achinese is certainly a separate language, and one that may have borrowed from Mon-Khmer languages in opportunities provided by former political alliances with the mainland, as indicated above.

There are several other separate languages in Sumatra proper, and on the islands flanking Sumatra in the Indian Ocean.

The Critical Survey of Studies on the Languages of Sumatra by Voorhoeve (1955) suggests that there are at least a dozen wholly distinct languages spoken in Sumatra. The main language names are given here.

Achehnese (Achinese, mentioned above) is a main language, as is Gayo, and at least two Batak languages. The two which have been studied most intensively (Toba-Batak and Karo-Batak) are said to be 'practically' considered as two languages. Among the numerous Batak dialects, a clear-cut linguistic distinction can be made between the group of southern dialects—of which Toba-Batak is a well studied exemplar—and the northern dialects (exemplified by Karo-Batak). (All the dialects from both groups are listed by name in Chapter 4, together with detailed lists for other languages and dialects.)

Middle Malay as well as Minangkabau are given as separate languages in the Critical Survey because they are listed as such on Esser's map, which we discuss below. Specific languages or dialects are listed without commitment as to whether they are dialects of Middle Malay or of Minangkabau. The latter is accepted as a separate language, but then difficulties arise in saying whether Kerinchi, for example, is one of the Minangkabau dialects, as listed in Esser's map, or a Malayicized language; besides the modern Kerinchi that is now spoken in Sumatra, there is an ancient Kerinchi preserved in a script of the rènchong type used for writing on bamboo and buffalo horn. Though Middle Malay was the actual language of the Palembang court, the edicts of the sultans of Palembang were written in Javanese.

Rejang is counted as an independent language that is very close to Malay. Though Lampung is linguistically independent also, it was formerly dependent on the political rule from Java (Banten sultanate) who sent his directives to the Lampung in Javanese. In modern times immigrants from Java are found on plantations all over Sumatra.

On the Indian Ocean side, Sumatra is flanked by three groups of islands. Languages spoken on these off-shore islands include Riau Malay, Simalur and Sikhulē, Nias, Mentawi dialects and Enggano dialects. Enganese was spoken on a main island and four small islands by a dense population in the last century, before the depopulation which reduced speakers to a few hundred by 1938.

Another list prepared by modern Indonesian scholars, under the influence of the Esser map, gives fifteen language names for Sumatra, with number of speakers for each. The total number of speakers of all languages on Sumatra approximates 9 million; itemization by language is given in Chapter 4, below.

JAVA

The total population of Java is estimated to be 65 million today, but there are only a few separate languages spoken in Java: Javanese, Sundanese, and Madurese—not to mention here the new national language (Bahasa Indonesia), which is discussed separately.

Java covers an area 600 miles long and at most 120 miles wide—about as large as England—and this constitutes a small fraction of the Indonesian land mass (perhaps 1/15th); but Java is populated by two-thirds of all the people in Indonesia. West Java, with 630 people per square mile was less densely populated in 1930 than Java as a whole (816 per square mile), and in the extreme west there were only 334 per square mile in Bantam (the former name for Java after which the Bantam rooster is named).

Bantam or Banten faces the Sunda Strait which separates Sumatra from Java, Sundanese is spoken in West Java, especially at the higher altitudes in the interior, while along the coast of West Java, Javanese speakers are more numerous than Sundanese speakers. In 'Central' Java—'central' in the sense of being most of Java—Javanese is spoken. And in East Java, Madurese is spoken. Madura is an island lying off the coast of the Java Sea at Surabaya, separated from the big island by a two mile wide Strait; not only is the Madurese language different than the languages spoken on the big island, but the culture of Madura is different than the rest of Java (e.g. the subsistence crop is corn rather than rice, and stock raising is favored despite extreme overpopulation). More Madurese speakers have emigrated than have remained in Madura. In 1930 there were less than 2 million Madurese speakers in Madura and more than 2 1/3 million Madurese speakers in East Java. For Java as a whole the population reached 12 1/2 million in 1860, almost 41 million in 1930 (816 per square mile), and in the next generation rose to 55 million (935 per square mile), and has since increased another ten million. Of the total population of over a thousand per square mile, some 8 percent of this population is Chinese or European; the numerous offspring of Dutch and Indonesian unions in Java are called Indo-Europeans.

BORNEO

Beside the 15 language names listed for the Sumatra 'group', and the three languages for the Java 'group', there are other 'groups' distinguished by Indonesian scholars, following Esser generally. Thus, there is a Borneo 'group' of a dozen languages, a Bali-Sasak 'group', and various other 'groups' in the Celebes; these are itemized below (Chapter 4).

Geographically, but not necessarily according to linguistic grouping, Borneo is in West Indonesia, and Celebes in East Indonesia. The two are separated by the Macassar Straits; the geological Sunda shelf sinks into the Macassar Straits east of Borneo, and shows where the old Asiatic mainland came to an end. The Macarese and Buginese colonies spread along the coast of Celebes and—across the Straits—along the coast of Borneo, and spread across the Java Sea to Bali and Lombok. The 1930 census gave Celebes a population of 4 1/3 million, or 57 per square mile.

Borneo is the largest island in Indonesia, but has a relatively short coast line, and a relatively sparse and homogeneous population, (e.g. there are no Pygmies in Borneo as there are in the Philippines, in the Malay Peninsula, and in the Andaman Islands between the Bay of Bengal and the Malay Peninsula). The population of Borneo may not greatly exceed 3 million, or 10 per square mile. Malay states were established on the south coast of Borneo and in some lower valleys of rivers, as the Kapuas, in the general region that was dominated by the Indo-Javanese kingdom of Majapahit. The Chinese were attracted by the mineral resources of Borneo, especially the gold mines on the West Coast, south of Sarawak, and founded states which once impeded European colonization.

There is evidence that all three sub-regions of Indonesia— West and North as well as Eastern Indonesia—are represented in present day Borneo, in the literature reviewed by Cence and Uhlenbeck (1958). Thus in North Borneo some groups of Philippine origin continue to speak Philippine languages, and in a wider area within northern Borneo generally there are languages that bear structural and lexical resemblance to languages spoken in the Philippines. (There are also Philippine and Philippine-type languages spoken in northern Celebes.) The Celebes influence is also apparent in Borneo—e. g. Buginese is spoken on the Borneo side of the Macassar Strait as well as on the native homeland or Celebes side. Chinese is spoken along some of the larger rivers in Borneo, and Sanskrit inscriptions are found in Kutai.

Malay dialects or languages not unlike Malay in Borneo are identified by various names (as Batang, Lupar, Iban or Sea Dayak), and are often named for the place where they are spoken: Brunei, Banjarese, Delang, Sambas Malay, and Ulu Malay (which may be the same as Sintang Malay), and Mualang which is closely related to the Sea Dayak Iban, and Pontianak, 200 miles up the Ayak and Belitang rivers.

In Western Borneo there are Land Dayak and Kenday Dayak; and other dialects or languages in part of Sarawak that are neither Sea nor Land Dayaks, as Bintulu, Matu, Narom, Long Kiput, and Kanowit. Ray used a cover-term, Melanau, for a series of languages spoken along the West Coast of Borneo, and in the interior along rivers.

The Bisaya language is spoken by groups named Bisaya near Brunei

Bay (not to be confused with the Bisayan that is spoken in the Philippines).

Sarawak Murut dialects or languages are spoken by two groups, one extending across interior Borneo, and the other called the North Borneo Murut which Adriani identified as a Philippine type, which is also known by the language name of Tagal. The Sarawak Murut in Indonesian Borneo are differentiated into seven dialects.

Dusun is the name applied to languages closely related to Tagal, above. Dusun speakers are found north and west of the Tagal. Dusun is spoken on rivers that flow into the South China Sea; also on Banggi Island. There are more coast Dusun (ten groups) than inland Dusun (half a dozen).

Bajau are sea nomads found on the north and east coast of Borneo. The Bajau language is also known in the Philippines and in Eastern Indonesia (along the coast of Celebes and on islands in Macassar Strait). Different dialects of the Bajau language are distinguished as Bayo, Turijeʔneʔ, Sama, Samah-Samah, or Samar-Lambah. Bajau is diversified in structure more than other Borneo languages; this was recognized by Esser by placing Bajau after his list of Borneo language names (in the list on the back of his linguistic map).

Ubian Sea nomads or sea gypsies or pirates are known by older names (Bolonginik, Balanini), and speak a language also known as Bandau. But Ubian is not the same language as Bajau, above. An island between Borneo and the Philippines is called Ubian, within easy range of North Borneo.

Illanun is equivalent to Lanun, whose speakers came to Borneo from the Southern Philippines (Mindinao).

Bulud-upi, of the northeast coast of Borneo, speak a Tagalog-type rather than Illocano-type of Philippine-type language. Sulu is spoken by people on islands in the Sulu Archipelago between Borneo and Mindanao, on Tawi Tawi, on some Philippine islands, and in several settlements on the north Borneo coast.

Tidung is spoken in five dialects on the east coast.

In East Borneo, Basap is a cover-term for many dialects (as Sajau Basap) in Bulungan, Sankulisang, and Kutai.

Labu may be a Malay dialect; it is spoken on the Lasan River.

Kenyah, a Central Borneo language, is spoken in the Kayan River highland (Apo Kayan), and also appears sometimes under the name of Kinjin as well as Kanyay; it is spoken in Indonesian Borneo (Punjungun) and in Sarawak.

The language of the Kayan is also called Busang. The names of the dialects differ in different areas. In 1849, a Bintulu Kayan vocabulary was gathered by Robert Burns (the Scottish poet) during his travels in the Kayan area of Borneo. There is great differentiation among the central Borneo languages spoken on the upper reaches of rivers that flow to the west and east coast of Borneo: Punan and Penan, Murik (resembling Kayan of Sarawak), Sibop dialects (Tinjar, Lirong, Long Pokun, and Sibop proper), Speng group of dialects or languages (Bok, Nibong, and Ba Mali or Bah Malei, and possible also Kajaman and Lahanan), and the Punan Lusong and Punan

Gang dialects of one language. The Punan Ba is a different language, apparently the one called Rejang Punan by Ray. The Beketan group is known by many names also (Buktan, Batsatan, Maketa, Punan, Mangkettan, and possibly Ukit). Penihing is the name of a distinct language, and Seputan (or Pen-yabung) that of another. Modang is the name of a language area in Bulungan, Berau, and Kutai where several dialects or closely similar languages are spoken (Long Glat, Long Wai, Segai). Embala is the name of a tribal complex, including three Taman tribes (Suai, Mendalein, Sibau), Palin (also a cover-term, like Embala), Lauk, Leboyan, and Kalis Dayak.

Maanyan merits special mention because this language was selected by Dahl from the whole plethora of Indonesian languages to be compared with Malagasy, the Malayo-Polynesian language spoken in Madagascar; subsequent lexicostatistic comparison was made between Malagasy and Maanyan by Dyen (1963). Maanyan is a West Borneo language, and Borneo in general is more differentiated linguistically than other Indonesian regions, and so may in general have been a possible area of dispersal of Indonesian languages. Specifically, Maanyan is one of a chain or cluster of dialects or languages which include also Dusun (and Dusun Deyahor Deah), Samihim, Siong or Sihong. Also closely similar to Maanyan is Luwangan (Lawangan) of South Borneo, said to be a divergent Dayak language.

Tabuyan on the Tewe and Montalat rivers is quite distinct from the Maanyan complex mentioned above, and from Ngaju, a widespread language which is distributed southeast and southwest from the middle reaches of the

Barito River. Ot Danum is also a South Borneo language.

Ngaju is of special interest because it is spoken as a second language by many peoples in the south of Borneo who have another language as their mother tongue. This makes Ngaju the lingua franca for most of South Borneo, though little known beyond South Borneo.

BAHASA INDONESIA

The famous lingua franca for all of West Indonesia, and much of Eastern Indonesia is of course associated with the new nation of Indonesia which, for stimulating national unity, attempts to develop a single national language called Bahasa Indonesia. . A whole volume of the Critical Bibliography series is devoted to the uses made of this lingua franca, so far; volumes in this series devoted to Sumatra and to Borneo are summarized above; another volume devoted to Java will be authored by Uhlenbeck (in press for 1964). Bahasa Indonesia changes the linguistic situation in Sumatra, in Borneo, and in Java, as outlined above, in that with the addition of an official lingua franca, there is one more language in each big island. In coastal areas of Indonesia generally, but particularly on smaller islands among which all travel between tribes is sea-going, Malay was (and is) often used as a second language, and hence as an unofficial lingua franca, and the most widespread one before the advent of Bahasa Indonesia, but not the only one. We have already mentioned the use of Ngaju as the lingua franca of Southern Borneo, and Ngaju is not an isolated instance of a wholly natural language being used by its native speakers at home, and also as a second language by others in a generally restricted area of neighbors, including rather far-flung neighbors. Bahasa Indonesia differs in several counts from the occasional use of a natural language for wider purposes that was not unknown previously in all the traditional areas of the Malayo-Polynesian family.

None of these previous instances had political status (national language status), as Bahasa Indonesia has. To be sure, the Hinduized kingdoms of Java would compose their administrative directives to Sumatra in Javanese rather than in one of the languages spoken on Sumatra(see above); but this would mean only that administrators in Sumatra had to learn Javanese, not that the population of Sumatra learned Javanese in any extensive way as a second language.

In previous instances in which a natural language, as Ngaju, did function as a lingua franca, it remained a second language for all non-Ngaju who learned it after their mother tongue, generation after generation. Only the Ngaju themselves speak Ngaju as their mother tongue. In contrast to this situation, not only is a variant of Bahasa Indonesian spoken as a native language by speakers of the numerous Malay dialects in Indonesian—and Bahasa Indonesia may be correctly classified as one more (and somewhat tampered with) dialect of Malay—but Bahasa Indonesia is being increasingly learned as a first language by children whose parents have different mother tongues. This leads to the unexpectable situation of a family that lacks a single domestic language. A friend from Java tells us that he spoke Bahasa

Indonesia in his family at home (the capital city of Djakarta where Javanese is the regional language); as a child, he spoke Bahasa Indonesia to both parents who had at least a passive knowledge of what was for them a second language, a national language to be learned laboriously as their children were growing up speaking it as their first language. Our friend's father spoke Javanese as his native language, and spoke Javanese at home in the presence of his Javanese relatives; his mother spoke Sundanese as her native language, and was slowly learning Javanese as well as Bahasa Indonesia while her children were growing up. For the children, Bahasa Indonesia is a mother-tongue, but not their mother's mother tongue. But one can extrapolate to the next generation when today's children, turned parents, will be bilingual in the regional language, as Javanese, and in Bahasa Indonesia, so that 'domestic speakers' will have two native languages.

As long as Indonesia remains a multilingual nation--as it certainly is today—Bahasa Indonesia will differ according to the regional languages spoken beside it. A very telling example of how this works occurred recently in Java where an eminent politician from Sumatra was expected to deliver a speech in Bahasa Indonesia. Facing a Javanese audience able to converse with each other in their most common variety of Bahasa Indonesia —the variety that is interlarded with Javanese loans—he spoke another variant of Bahasa Indonesia —one interlarded with loans from Sumatra languages—and was not generally understood.

Even if there were no remedy to the regional differentiation of Bahasa Indonesia there would still be switching between it and Javanese, for example, because the grammar of the latter obliges the speaker to specify the social hierarchy of the person addressed in respect to himself, and Bahasa Indonesia does not. Where the culture has changed, it is easier to accommodate the changed culture by switching languages—as Javanese to Bahasa Indonesia — than it is to change the habits of the language which embarrass the speaker in some (but not all) situations.

There are two remedies to the regional differentiation which makes Javanese the chief lexical donor to written Bahasa Indonesia: education and compromise. Educational policy is centralized in Java, and textbooks for the nation are published in Java; in principle Javanese loans in the national language could be learned at school by those attending school in non-Javanese parts of Indonesia. Or by compromise, popular borrowings from widespread Indonesian languages in other parts of the nation might be officially recognized and then included in textbooks which are used in teaching children in primary and secondary schools.

CELEBES: MAXIMUM NUMBER OF INDONESIAN LANGUAGES

One such textbook examined by us is a high school level geography book written in Bahasa Indonesia.. It provides conspicuously a map of regional divisions of language groups, closely following the linguistic atlas prepared in Dutch colonial times by Esser (1938). This map includes 15 languages or language names in the Sumatra group (I); 3 languages in the Java group (II); 12 languages in the Borneo group (III) and in this group (III) Ngaju (Ngadju) is located in Central Borneo without reference to the second language use of Ngaju as a lingua franca for most of South Borneo; 4 languages in the Bali-Sasak group (IV), located in Bali, Lombok, and the western bulge of Sumbawa; 5 languages in the Philippine group (V), located in Sangihe islands (Kepulauan Sangi) north of Celebes and in the Minahasa part of Celebes; 2 languages in the Gorontalo group (VI), immediately to the east of group (V) in north Celebes; 2 languages in the Tomini group (VII), east of group (VI) in north Celebes; 12 languages in the Toradja group (VIII), in central Celebes and north coast off-shore islands; 4 languages in the Loinang-Banggai group (IX), on the peninsula extension of central Celebes and off-shore islands; 7 languages in the Bunku-Laki group (X) on the south east extension of Celebes and on an island beyond (Kabaena); 10 languages in the South Celebes group (XI), on the island of Selajar below the southern extension of Celebes which flanks Macassar Strait to the west, including here Buginese (also spoken on the Borneo side of the Macassar Strait, and elsewhere), the Macassar dialects and Mandar—three languages of this group (XI) that are most surely in need of reclassification; 2 languages in the Muna-Butung group (XII), on islands off the southeast extension of Celebes except Kabaena which is included in group (X), above; and additional languages in the Bima-Sumba group (XIII) located in the Lesser Sundas (most of Sumbawa, Komodo, and the western half of Flores); and languages in the Ambon-Timor group (XIV) located in the eastern half of Flores and the remaining Lesser Sunda islands east of Flores, and on islands flanking the Banda Sea: Kepulauan Tanimbar, Kepulauan Aru, Kepulauan Ewab, Kepulauan Watubela, Ceram, Ambon and Buru; the Sula-Batjan group

(XV), east of group (IX), above, on the southern Molucca islands; and finally languages of the South Halmahera-Irian group (XVI) on the Moluccas facing western New Guinea.

After high school study of the map from which the preceding list is taken, the Indonesian student is able to appreciate how multilingual his nation is in fact, and therefore how great is the need of a single national language or lingua franca like Bahasa Indonesia. .

COMMUNICATION IN THE NATIONAL LANGUAGE

There is, no doubt, need for a single language, spoken or understood by all who are concerned with communication between the centralized government in Java and the rest of the nation; who are engaged in business enterprises that extend beyond the language barriers of the regional languages, and, less imperatively, for education (since multilingual education is conceivable in a multilingual country). The need for a single language that is widely understood cannot be questioned, but it can be asked why the language selected for purposes of national internal communication should be variants of dialects of Malay, a natural language, partially unified in Java as Bahasa Indonesia, . It seems probable that the selection made was better than any other alternative would have been. Malay dialects have been localized largely in the west of West Indonesia (see above), but one or another variety of Malay was widespread wherever trade or piracy flourished in the past, especially at ports of call in shipping. With some few exceptions in East Indonesia, the many different languages of the nation are all sister languages, and Malay—

or in its Javanized form Bahasa Indonesia —is one of the sister languages. All sister languages share to a large extent the same words, in an isomorphic sense (cognates), and hence it is presumptively easier for a native speaker of any one of the hundred or so related languages or dialects in the nation to learn Bahasa Indonesia than it would be to learn a language from the unrelated Indo-European language family, as Dutch or English—or even an Indic language, despite the earlier loans from Sanskrit (see above).

For better or for worse, Bahasa Indonesia is being taught and used as the national language of a nation that covers as wide an expanse of the earth's surface as the United States. Internal communication in Indonesia by mass media, by personal interview, and by correspondence is still slowed down by the continued reliance on boats (rather than planes) for travel. For example, we proposed to correspond with former students now resident in Ambon to obtain an estimate of the number of languages spoken in the Ambon-Timor group (XIV), whioh is merely localized in the list of language groups given above. Our air mail letter would go to Djakarta in two or three days, and then go by boat to Ambon in two or three months, if the ship did not encounter any difficulty. It would take half a year to obtain an answer to an inquiry by correspondence with Ambon, under favorable circumstances.

Correspondence, books, newspapers are of course written in Bahasa Indonesia. . The educated adult of today spent his formative years learning much of Western culture through books written in Dutch; he can read and talk Dutch but he does not talk Dutch to his children. Since he unquestionably wants his children to know about the science and art, and especially the technology of Western culture, he realizes that it is necessary to create a whole new series of textbooks which will serve the same purpose in Bahasa Indonesia that was formerly served by Dutch. The established professionals are well on their way to accomplishing this task of transformation (rather than translation) for their children's education; but that there is a Dutch source behind the Indonesian textbook--as in the case of the Esser linguistic atlas which is closely followed in the high school geography book, cited above, written in Bahasa Indonesia--does not seem to matter one way or another to those interested in giving their children access to scientific knowledge. It is interesting to note that just as the Islamic impact was strained through Hindu languages and cultures in diffusing to the East Indies, so again (a millenium later), the scientific impact of Western culture is strained through the Dutch language known by the parents of the children who assimilate scientific knowledge in the Bahasa Indonesia language.

That language is accordingly used not only for practical and social purposes but for diffusing scientific information within the nation, and even beyond, if books published in Djakarta are to be used in Malaysia (Sarawak, Sabah (North Borneo), Singapore and the former Federated States of Malaya).

Despite the already acquired knowledge of Dutch by educated Indonesians and Indo-Europeans, the language to be used for participating in the wider international scene may be English (acquired through training relatively few Indonesians to teach teachers of English for a future program that will reach relatively many Indonesians). The language for wider international communication cannot now be Dutch—even if it once could—because Dutch is no longer being taught in Indonesia. It cannot be Bahasa Indonesia, because that language is understood in only one other nation—Malaysia, also part of West Indonesia.

NORTH INDONESIA

Bahasa Indonesia would not be used in North Indonesian countries, because other languages are used there for internal communication. In the Philippines, for example, the two main internal languages are Tagalog and Illocano, and other languages beyond Luzon—spoken as far south as Mindanao and the northern parts of Borneo and the Celebes—are often classified as being of a Tagalog-type or an Illocano-type. And English is the language used for wider international communication, despite the much earlier prominence of Spanish and the recent occupation by Japanese speakers.

In the south, the Philippines are almost connected by land to Borneo, by virtue of the Sulu Archipelago between North Borneo and Mindanao. Man out of Southeast Asia did not sail across the South China Sea to go to the Philippines; there is evidence to suggest that prehistoric migration to the Philippines was by way of Borneo which, then, became a dispersal center not only for West Indonesia but for the major part of North Indonesia as well. Cultivated plants and animals followed the path of emigrants from the south. And in historic times, Indian influence, under the political domination of Sri Vijaya and its successor, the Majapahit kingdom, reached as far as Manila.

FORMOSA

The mountains of Formosa can be seen from a mountain top in the Batan islands which lie just north of Luzon (38, 000 square miles), the northernmost big island of the Philippines.

Formosa is better known today as Taiwan, the seat of the Nationalist Chinese government. Aboriginally, it was populated by Austronesian speakers, generally classified as Indonesian, although possibly representing a separate branch within the Austronesian family. An off-shore island (Botel Tobago) and its people, called Yami, is closer to Batan than to Formosa, but belongs culturally and linguistically to tribal Formosa—the mountain peoples of Formosa. They number some 200, 000—perhaps only 160, 000—all told, and though some of the ten tribes are numerous—50 to 90 thousand Ami; 36 to 45 thousand speakers of dialects of Atayal; 32, 874 Paiwan; 19, 023 Bunun—others number a thousand individuals, more or less (1, 614 Yami; 708 Saisiyat and there are only 185 Thao). In addition to mountain peoples, there are plains and coastal tribes on the China side of the mountains that are said to be completely Sinicized tribes, subjected for the last 300 years to immigrating Chinese (Hoklo, Hakka). These plains tribes—14 all told—have lost their original culture, and in some instances their languages; some of the plains tribes still speak Indonesian languages, as all formerly did, but it is not known which have been replaced by Chinese, and which are still spoken. The Taiwan aborigines of the mountains were protected for half a century by Japanese policy which excluded all visitors to the tribal territory except investigators and mountain climbers, and did not permit tribal people to leave their territory (1895-1945). After the war, there was large scale exodus of young women to towns along the east coast, and with this emigration of young womanhood, the culture-preserving role of women was lost. This was followed by a Chinese compromise which called for an entry-permit to the tribal areas, but not an exit-permit, except for permanent outside residence; Christian missionary activity has increased, stimulating more change in culture than in language.

Knowledge of the tribal languages of Formosa is based largely on text collections, with brief notes on Atayal and Yami (Ogawa and Asai), and on Fang-kuei Li's work on Thao. There are folkloristic traditions of former Negritos on Formosa, and artifacts were found at places where the Paiwan traditionally located the Negritos—places avoided by modern Paiwan, though they are suitable for agriculture. On the basis of lists obtained, Dyen (1963) distinguishes six separate Austronesian languages in Formosa; four of these languages in central Formosa ('the Central Formosan Hesion') are more closely related to Indonesian and Polynesian languages than are the languages represented by the two remaining lists ('the Atayalik Subfamily').

Hainan and Luzon face each other across the South China Sea. Little is known about the Indonesian languages which are supposed to be aboriginal to Hainan, a fairly large island (13,500 square miles) whose population (3 million) is mainly Chinese today; Hainan is a part of Kwangtung province of mainland China. The known languages are Thai rather than Austronesian.

MALAGASY

If Madagascar were located in any part of Indonesia, it would loom larger than Sumatra (163,145 square miles), and be second only to Borneo (290,285 square miles). Located off the southeastern coast of Africa, Madagascar (228,589 square miles) is on the other side of the Indian Ocean from Indonesia from which its Malagasy speakers migrated in prehistoric times; the present day population includes French speakers as well as speakers of African languages. The Malagasy have folkloristic traditions of predecessors, who are pygmies, living near waterfalls, with uncombed hair, hunting and gathering, leaving footprints no larger than a child's, and so on. In seeking traces of such pygmies, a previously unknown hill tribe was found in 1961 by Gernböck (1962). The fact that one or more languages of Madagascar have membership in the Austronesian family had been obvious from the first, despite the geographic isolation which makes Malagasy the farthest removed of all languages or language groups in a language family which is famous for having covered more of the earth's surface in prehistoric time than has any other single language family (in prehistoric times; Indo-European today is the most widely distributed of all language families, by virtue of the movements of a few of its member languages—Russian across Asia to the Pacific, Spanish and Portuguese to Latin America, English to North America and Australia—movements which took place in historic times, however).

When it was first observed that Malagasy did belong to the Austronesian languages, the path of migration or migrations was difficult to discuss for two reasons. It was at first not certain how many languages or dialects were subsumed under the cover-term Malagasy; e.g. is Hova a dialect or separate language within the Malagasy group? In 1951, the population of the Tanala tribe, also called Antanala, was 170,000; the Tanala are sometimes known by sub-tribe names (Menabe and Ikongo). Another tribal cluster of about 25,000 people live to the north of the Tanala—the poorly described Bezanozano (Antaiva, Antanka, Tabay) are sometimes grouped with the Tanala. Both tribes are said to speak "Malayo-Polynesian languages of the Eastern Malagasy division " (HRAF, 1958). But this kind of statement begs the question; the question is whether there are language barriers within Malagasy, or whether Malagasy is the name of a single Malayo-Polynesian language, dialectically differentiated.

The latter appears to be the case. There are, in fact, two large dialect groups of Malagasy, one located on the west coast of Madagascar, which is distinguished by fewer dialect names than the second group. The second large dialect group includes several dialect names for speakers located in the east coast; additional dialect names for those in the eastern watershed (where the Tanala live, the best known tribe ethnographically); and additional dialect names also for those on the high plateaus of Madagascar; and a few dialects are classified as transitional between the two main dialect groups. Dahl (1951) was surprised at the uniformity of grammar among all these Malagasy scattered over one of the largest islands of the world—a uniformity far exceeding that found in any comparable land mass in the traditional Indonesia area.

The second reason why it was difficult to discuss the prehistoric migration of the Malagasy from Southeast Asia to Madagascar was that, to begin with, Malagasy could be recognized as an Austronesian language in general, rather than as a language affiliated more closely to one group than to another group of islands between the Asian mainland and Australia. Dahl (1951) reviewed possible historical clues which point to Borneo as the possible island of origin for the Malagasy, and suggested 400 A. D. as the date of the first migration to Madagascar; he further hit upon Maanyan, spoken in Southeast Borneo, as the language with which Malagasy bears the closest subrelationship, and where these two languages—so closely connected linguistically, yet so far apart geographically—are actually different today, the differences are assigned to post-separation developments in one or another or both languages. The conclusion reached about the subrelationship of Malagasy in Madagascar and Maanyan in Borneo, whether or not convincing, has been lexicostatistically checked by Dyen (1963), and thereby confirmed in revised terms (a Malagasic cluster).

PHILIPPINE TYPE LANGUAGES

North Indonesia centers in the Philippines—7,000 counted islands whose total land mass is one and a quarter times greater than that of Great Britain. Of these thousands of islands, 466 have an area of more than 2 1/2 square miles; Luzon and Mindanao constitute 67 percent of the land area; these two big islands, plus nine others constitute 95 percent of the land area of the

Philippines. Between Luzon and Mindanao lie (1) Mindoro, north of the Sulu Sea; and, flanking the Sulu Sea, (2) Palawan to the west, and to the east (3) the numerous islands of the Visaya or Bisaya group.

The population of the Philippines has increased threefold in the last two generations. The density of population in areas under cultivation is 984 to the square mile—second only to that of Java. In general, decrease in population density is noticeable from north to south; and from west to east. More emigrants from the Philippines are found in Hawaii than in the rest of the United States—some 53,000 Ilocanos and Bisayans from Cebu were in Hawaii in 1930 (constituting 67 percent of sugar cane plantation workers), as against some 45,000 in the rest of the United States.

Within the last decade, at least three overviews of Philippine or Philippine type languages have appeared (1952, 1962, and 1963).

That by Conklin (mimeographed, 1952) follows the main geographic features in listing languages according to the location of their speakers—Luzon, Bisayas, and Mindanao—and within each major division, from north to south and from east to west. Dialects of some languages are indicated, but subrelationships of wholly separate languages are restricted to distinguishing between an Ilocano type ('Iloko-Type') of Luzon and adjacent islands, and a Tagalog type, between Luzon and the Bisayas; and presumably a noncommittal type. Dialects are listed parenthetically, but what is generally regarded as a dialect may in some cases turn out to be a separate language; hence the so-called 'dialect' names are included in chapter 4, below, but omitted in this discussion which attempts chiefly to distinguish languages of the Ilocano from those of the Tagalog type. Location of the language is indicated by adding the name of the island after the language name, or after the series of names for the same language (synonymy).

Conklin gives twenty-two language names for Luzon and adjacent islands. The first dozen (1 to 12 inclusive, in the following list) are languages of the Ilocano type, as is the language numbered 15:

1. Ivatan, Batan; Batan
2. Iloko, Ilocano; Luzon-Babuyan, Mindoro, Mindanao
3. Apayao, Apayaw, Isneg, Isnag; Luzon
4. Ibanag, Ibanák, Kagayán, Cagayanes; Luzon-Babuyan
5. Tinggian, Tinguian, Itneg; Luzon
6. Kalinga, Calinga; Luzon
7. Bontok, Bontok Igorot, Guianes, Itetapanes; Luzon
8. Ifugao, Ipugaw, Ifugaw; Luzon
9. Kankanai, Kankanay, Lepanto Igorot; Luzon
10. Ibaloi, Inibaloi, Inibiloi, Nabaloi, Benguet-Igorot; Luzon
11. Gaddang, Gaddan; Luzon
12. Isinai, Inmeas; Luzon
15. Pangasinan; Luzon

A few languages spoken on Luzon and adjacent islands are of the Tagalog type (14, 17, 20, 21):

14. Sambali, Sambal; Luzon

17. Tagalog; Luzon-Marinduque, Mindoro-Palawan-Masbate

20. Bikol, Bicol, Vicol; Luzon-Catanduanes-Ticao-Burias, Masbate-Samar

21. Dumagat, Dumaget; Luzon-Polillo-Alabat-Kalawat

The remaining languages listed for Luzon and adjacent islands are classified neither as of the Ilocano type nor of the Tagalog type; we give the label 'non-committal type' to these (13, 16, 18, 19, 22):

13. Ilongot, Ilungut, Lingotes; Luzon

16. Pampangan, Pampango, Pampangga, Kapampangan; Luzon

18. Ermiteño, Ermitenyo; Luzon

19. Caviteño, Kabitenyo; Luzon

22. Negrito, Aeta, Eta, Ita, Agta; Luzon

A few of the languages spoken in the Bisayas (islands between Luzon and Mindanao) are of the Tagalog type, including Tagalog itself (see 17 above), or of the Ilocano type including Iloko or Ilocano itself (see 2, above). Those of the Tagalog type are numbered 39, 40, 43, 44, 45, 46, 47, in the list which follows:

39. Hiniraya, Binukidnon; Panay

40. Banton; Banton

43. Sugbuhanon, Sebuan, Cebuan, Cebuano, Binisayang Cebuano, etc.; Cebu-Negros-Leyte-Siquijor-Dinagat-Siargao, Mindanao

44. Bohol, Boholano; Bohol

45. Agtaa; Negros

46. Samar-Leyte, Samar-Leyte Bisayan, Waray-Waray; Samar-Leyte-

Masbate-Biliran

47. Batak, Tinitianes; Palawan

The remaining languages spoken in the Bisayas are of the 'non-committal type' in Conklin's list (i.e. are not specified as being either of the Ilocano or of the Tagalog type):

23. Iráya; Mindoro
24. Aláhgan; Mindoro
25. Batángan, Barangan, Tiron; Mindoro
26. Tagáydan, Tagáidan; Mindoro
27. Nauhán; Mindoro
28. Pulá, Tadianan, Durugmun, Buctulan; Mindoro
29. Bángon, Bangot; Mindoro
30. Baribí, Beribi; Mindoro
31. Buíd, Bukid, Buhid, Buhil, Buquil; Mindoro
32. Hanunóo, Hanono-o, Hampangan, Bulalakao, Minangyan; Mindoro
33. Kalamian, Calamiano; Palawan-Calamian
34. Kuyonon, Cuyo, Cuyuno, Cuyonon, Kuyunon; Cuyo-Palawan-Mindoro-Sibay-Semirra-Caluya-Ilin
35. Ratagnón, Latagnon, Aradigi, Latan, Lactan; Mindoro
36. Agutaynon, Agutainon; Agutaya-Ambulong
37. Hantik, Antiqueño, Antique; Panay
38. Hiligaynon, Ilongo, Panayan, Binisayang Ilonggo; Panay-Negros-Mindoro-Masbate-Guimaras-Tablas-Romblon, Mindanao

41. Aklan, Aklanon; Panay
42. Ati, Mundo, Montescos, Kalibugan; Panay
48. Tagbanuwá, Tagbanwa, Tagbanua; Palawan
49. Palawan, Palawanen, Palawano; Palawan
50. Ke-néy, Kenne, Queney; Palawan
51. Melebuganon, Mĕlĕbuganon; Balabac
52. Jama Mapun; Cagayan, Sulu

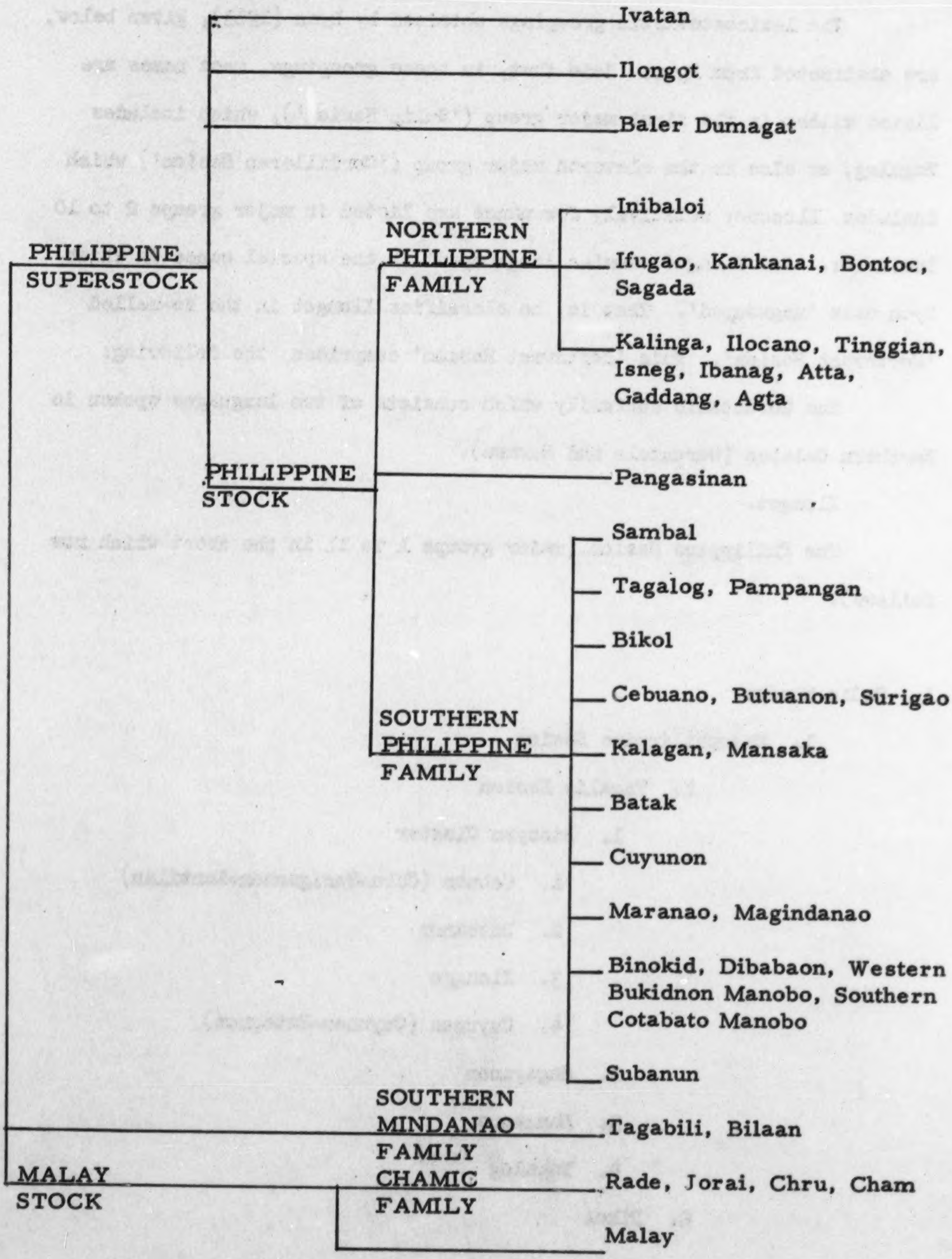
For Mindanao (and islands to the south), an occasional name is classified as belonging either to the Tagalog type, as Sugbuhanon (see 43, above), or as Hiligaynon (see 38, above), or to the Ilocano type as Ilòko or Ilocano (see 2, above); but most languages in the Mindanao group are unclassified in this respect (non-committal in type):

53. Chabakano, Chabacano, Tsabakano; Mindanao
54. Davaweño, Dabawenyo; Mindanao
55. Subanun, Subanu, Subano; Mindanao
56. Taw Sug, Sulu, Joloano; Sulu, Palawan
57. Yakan, Yacanes; Basilan
58. Samal, A'a Sama; Mindanao-Sulu
59. Lanao, Illanos; Mindanao
60. Magindanao, Magindanau, Magindanaw; Mindanao
61. Bukidnon; Mindanao
62. Mamanua; Mindanao
63. Manobo; Mindanao

64. Ata, Atá; Mindanao
65. Mangguangan, Manggulanga, Manguangao; Mindanao
66. Tiruray, Teduray, Tirurai, Teguray; Mindanao
67. Tagabili, Tagabelies; Mindanao
68. Bilaan, Bila-an, Bilanes, Tagalagad; Mindanao-Sarangani
69. Tagakaolo, Kagan, Kalagan, Saka, Calagars, Calaganes; Mindanao
70. Kulaman, Culamanes; Mindanao
71. Bagobo; Mindanao
72. Mandaya; Mindanao
73. Isamal; Samal
74. Sangil, Sangir, Sanggil; Mindanao-(Sangihe and Talaud Islands)
75. Bajau, Badjo, Bajao, Badjaw, Luaan, Lutaos, Lutayaos, Orang Laut; Sulu Sea-Celebes Sea-Sulu Archipelago

It has been suggested that, in addition to an Ilocano type and a Tagalog type, an equally identifiable and coordinate Southern type of Philippine language (like Tagabili and Bilaan) is justified—on the basis of relatively few phrase introducers, and other structural features.

The lexicostatistic subgroupings obtained by Thomas and Healey (1963) are well summarized in a single chart which follows.


Ivatan
Ilongot
Baler Dumagat
Inibaloi
NORTHERN PHILIPPINE FAMILY
PHILIPPINE SUPERSTOCK
Ifugao, Kankanai, Bontoc, Sagada
Kalinga, Ilocano, Tinggian, Isneg, Ibanag, Atta, Gaddang, Agta
PHILIPPINE STOCK
Pangasinan
Sambal
Tagalog, Pampangan
Bikol
Cebuano, Butuanon, Surigao
SOUTHERN PHILIPPINE FAMILY
Kalagan, Mansaka
Batak
Cuyunon
Maranao, Magindanao
Binokid, Dibabaon, Western Bukidnon Manobo, Southern Cotabato Manobo
Subanun
SOUTHERN MINDANAO FAMILY
Tagabili, Bilaan
MALAY STOCK
CHAMIC FAMILY
Rade, Jorai, Chru, Cham
Malay

The lexicostatistic groupings obtained by Dyen (1963), given below, are abstracted from Dyen. Note that, in these groupings, most names are listed either in the first major group ('Sulic Hesion'), which includes Tagalog, or else in the eleventh major group ('Cordilleran Hesion') which includes Ilocano; relatively few names are listed in major groups 2 to 10 inclusive. And Ilongot remains 'ungrouped' in the special sense in which Dyen uses 'ungrouped'. That is, he classifies Ilongot in the so-called 'Northwest Hesion'. This 'Northwest Hesion' comprises the following:

The Gorontalic subfamily which consists of two languages spoken in Northern Celebes (Gorontalo and Suwawa).

Ilongot.

The Philippine Hesion (major groups 1 to 11 in the chart which now follows).

1. Sulic Hesion
    1. Mesophilippine Hesion
        1. Tagalic Hesion
            1. Bisayan Cluster
                1. Cebuan (Cebu-Surigaonon-Kantilan)
                2. Butuanon
                3. Ilonggo
                4. Cuyunon (Cuyunon-Ratagnon)
            2. Cagayanon
            3. Mamanua
            4. Tagalog
        2. Bikol

        3. Mansakic Cluster
            1. Mansaka
            2. Tagakaolo
        4. Hanunoic Subfamily
            1. Hanunoo
            2. Buhid
        5. Irayic Cluster
            1. Iraya
            2. Alangan
            3. Nauhan
        6. Sabanum
    2. Dibabaic Subfamily
        1. Dibabaon
        2. Agusan-Manobo
    3. Kalamian (Kalamian-Agutaynon)
    4. Palawanic Subfamily
        1. Palawano
        2. Babuyan
        3. Tagbanua
    5. Bukidnic Subfamily
        1. Bukidnon
        2. Central Manobo
    6. Pampangan
    7. Cotabato-Manobo
2. Maranao
3. Casiguran

4. Yakan
5. Baler
6. Tiruray
7. Murutic Subfamily
    1. Murut
    2. Tarakan
    3. Bolongan
8. Dusun
9. Bilic Subfamily
    1. Bilaan
    2. Tagabili (Sinolon-Kiamba)
10. Ivatan (Ivatan-Itbayat)
11. Cordilleran Hesion
    1. Inibaloy (Daklan-Kabayan-Bokod)
    2. North Cordilleran Cluster
        1. Banagic Cluster
            1. Isneg Hesion
                1. Itawic Cluster
                    1. Itawi
                    2. Malaweg
                2. Barran (Barran-Mabwangan)
                3. Bayag (Bayag-Kabugao)
            2. Ibanag
            3. Gaddang Subfamily
                1. Christian Gaddang
                2. Pagan Gaddang

    4. Atok
    5. Yogad
2. Ilocano
3. Kalinga Subfamily
    1. Balbalasang (Babalasang-Lubo-Mallango-Lubuagan)
    2. Pinukpuk (Pinukpuk-Tabuk)
4. Igorot Subfamily
    1. Kankanay (Buguias-Mankayan-Kapangan-Bakun-Kibungan)
    2. Sagada
    3. Bontok
    4. Bayyo
5. Ifugao Subfamily
    1. Kiangan (Kiangan-Banaue-Hungduan-Hapao)
    2. Mayaoyao
    3. Hanglulic Subfamily
        1. Hanglulu
        2. Kalanguya
6. Isinay (Aritao-Dupax)
7. Piggattan

Conklin's and Dyen's classifications of Philippine languages differ in three respects. Conklin's classification does not deal with higher order classifications as does Dyen's. Differences in lower order classifications are a matter of (1) subordination of dialect names under language names (e.g. "Conklin treats the similarity between Agusan-Manobo and Dibabaon as a dialectal difference . . . . Conklin's judgment of mutual intelligibility appears to point to approximately 60.0 o/o (rather than 70.0 o/o [used by

Dyen]) as the language limit"), and (2) the languages positively assigned to the Northern Luzon and Central Philippine groups (e.g. Conklin treats Ivatan, Kalinga, Gaddang and Isinay as only probably North Luzon, while Dyen treats the last three as unquestionably members of this group but the first as probably not a member).

MICRONESIA

1.5. The Micronesian islands are scattered over enormous distances east of the much larger Philippine Islands, and very far east of the half of Borneo that is north of the equator. Only a few Micronesian islands are found below the equator, while all of New Guinea and all of the islands in Melanesia lie south of the equator. The Micronesian islands north of New Guinea and Melanesia constitute, as Matthews (1950) says, a geographical entity which ". . . comprises festoons of islands lying mainly north of the equator between long. 130° E. and the Date Line. . . The Palaus, with the Marianas and the Bonin Islands, form a westerly volcanic arc, describing a curve between the Moluccas in the south and Japan in the north. This is the western limit of Micronesia. A second coral arc, representing the eastern limit, extends from the Marshalls . . . to the Ellice Islands by way of the Gilberts. In between these Palau-Mariana and Marshall-Gilbert arcs lies the long central band of the Caroline Islands, the most extensive Micronesian archipelago. The western outliers of the Carolines (Yap, Ulithi, etc.) are seen to continue the Palau festoon northwards into the Marianas. . . All Micronesia, except the Marianas and part of the Gilberts, lies between the equator and lat. 10° N. The Marianas extend beyond 20° N., but not to the tropic of Cancer, and half the Gilberts, like the isolated Nauru and Ocean Island (Banaba), lie south of the equator. The greatest southerly reach of Micronesia is not more than 5°, which gives a maximum vertical extension of under 25°. Four of the five archipelagos, viz. the Palaus, the Marianas, the Marshalls, and the Gilberts, have a vertical lie; the Carolines, by contrast, a horizontal one."

Micronesian languages are spoken beyond the geographic entity defined above, which we may call the Micronesian area; and a few languages which do not belong to Micronesia linguistically are spoken in the Micronesian area. Thus two Polynesian Outliers, Kapingamarangi and Nukuoro, are spoken in South-central Micronesia, between the Carolines and the Gilberts. Two Indonesian languages generally classified more specifically as Philippine in type are (1) Chamorro, spoken in the Marianas, and (2) Palau, spoken in the western Carolines.

Of the four main areas in which Austronesian languages are spoken, the languages in Micronesia have been less studied and certainly less described than the languages in Polynesia, Melanesia, or Indonesia. It may be uncertainty or insufficiency of information that has led to the controversial position in which two of the languages of Micronesia are held, Yap and Nauru. These languages are supposed to belong marginally, doubtfully, or aberrantly to Micronesia (in a linguistic sense). They are certainly different than other languages of Micronesia, and for that matter, different than other Austronesian languages. In Yap, for example, there are glottalized consonants, more expectable along the west coast of native America than in Oceania. But there is no close subrelationship between Yap and Nauru; they are separate, coordinate members of the Austronesian family, and though both are spoken in Micronesia, they are not Micronesian neighbors. Yap is spoken in the western Carolines, and Nauru is spoken below the equator, southeast of Kapingamarangi and west of the Gilberts. It would seem that Yap and Nauru are each divergent members of the nuclear Micronesian languages to which we now turn.

The nuclear Micronesian languages are spoken in the Carolines, in the Gilberts, and in the Marshalls. One of these nuclear languages, Gilbertese, is also spoken as a Micronesian Outlier in western Polynesia, on the island of Nui, one of the Ellice Islands; another of these, Mapia, is a Micronesia Outlier, spoken in Dutch New Guinea and closely related to the nuclear Micronesian language called Sonsoral, according to Capell (1963). The remaining nuclear Micronesian languages are all spoken in Micronesia, and most are listed by Dyen (1963) as members of Carolinian subfamily—namely the Ponopean language (with dialects called Ponape, Ngatik, Mokil, Pingelap); two Trukic languages, Trukese and Wolean (with dialects of the latter being Woleai, Pulawat, Satawal); a fourth language called Marshallese, and a fifth language called Kusaiean.

Besides these, another language, Gilbertese, is most closely related to members of the Carolinian subfamily, although this estimate is based on a subadequate list. It happens that Nauru, one of the two controversial languages of Micronesia mentioned above, turns out to be lexicostatistically close to the Carolinian subfamily, although Nauru is less close than is Gilbertese.

Other languages spoken in the Carolines would also seem to belong to the Carolinean subfamily, although lists for such other languages were not available for Dyen's computations, as Tobi (west of Palau) and Sonsoral. So also, Ulithi is known to be very close to Trukese linguistically—hence it belongs not only in the Carolinian subfamily but probably also in the Truckic group of that subfamily. Mortlock near Truk is not a separate language, as is sometimes reported, but a dialect of Trukese.

Marshallese is spoken in two dialects (Ralik and Ratak), and there appears to be little or no dialect differentiation in Gilbertese. The total number of separate nuclear Micronesian languages, accordingly, is at least a half dozen, and possibly more, depending on whether Ulithi, Tobi, and Sonsoral are indeed separate languages, and also depending on whether the two controversial languages, Yapese and Nauru, are included among the nuclear Micronesian languages.

The position of nuclear Micronesian languages within the Austronesian family has been variously treated.

In earlier classifications, though often listed as a separate branch of Austronesian, Micronesian was described as particularly closely related to Melanesian — even to the point of being treated as a sub-branch of a Melanesian branch — on the basis of typological similarities (as the association of pronominal suffixes with certain classes of nouns) between nuclear Micronesian languages and some languages spoken in Melanesia.

Matthews (1950) regards nuclear Micronesian as a separate branch of Austronesian 'lying completely outside the orbit of the other three'— Melanesian, Indonesian and Polynesian.

Grace (1955), primarily on the basis of shared innovations in vocabulary, groups together as the New Hebrides-Banks subgroup of Eastern Austronesian: (1) nuclear Micronesian, including Nauru and Yap, (2) Southern New Hebrides, (3) Pentecost, Aurora and Leper's Islands in the New Hebrides and the Banks and Torres Islands immediately to the north, and (4) the remainder of the New Hebrides, plus Fiji, Rotuma, and Polynesian. Members of the last subgroup, (4), are distinguished from the rest on the basis of the fact that Dyen's *R is lost (reflected as zero) in languages of sub-group (4) and differentially lost and retained in languages of the other subgroups.

Grace's Eastern Austronesian (Malayo-Polynesian) includes, in addition to the New Hebrides-Banks subgroup described above, all the other Austronesian languages spoken in Melanesia east of West New Guinea.

Dyen (1963) does not include the nuclear Micronesian languages ('Carolinean subfamily') in his 'Malayopolynesian', the largest subgroup of the Austronesian family (here 'Malayopolynesian' is used in a new sense—in a more restricted sense than Austronesian, in contrast to all previous usage in which Malayo-Polynesian and Austronesian are synonomous).

Dyen's Malayopolynesian subgroup of Austronesian includes all the languages of his sample which are generally classified as Indonesian (including the Philippines, Palau, Chamorro, Malagasy, and Central Formosa) except Enggano, Southern Halmahera and one group on Formosa. It also includes all the Polynesian languages. But it includes only eight languages spoken in Melanesia: Fijian and Rotuman in eastern Melanesia, Kerebuto, Lau and Toqabaita in the southern Solomons, Efate in the New Hebrides, Mota in the Banks, and Motu in Papua. Dyen's non-Malayopolynesian Austronesian languages are thereby: one of two groups on Formosa, Enggano in Indonesia, all languages spoken in Melanesia (including West New Guinea and Southern Halmahera) except the eight languages listed above, and nuclear Micronesian. But Dyen's groupings are made on the basis of percentages of shared basic vocabulary from lists of 174 to 200 items. Languages for which the lists included only 150-173 items were excluded from Dyen's main classification and their possible classification was commented on; Gilbertese was such a language. On the position of Gilbertese Dyen says "Gilbertese has its highest percentage ... with the Carolinean Subfamily ... Its next highest percentage is ... with the Polynesian Subfamily ... Thus Gilbertese, if not inflated, presents an argument for introducing the Carolinean Subfamily into the Heonesian Linkage" (and this is the subgroup of his 'Malayopolynesian' group in which Polynesian belongs).

Dyen's higher order groupings differ radically from Grace's in that Dyen includes in one major group both Western and Eastern languages and excludes from this group most of the languages of Melanesia. Grace, on the other hand, excludes from his Eastern group all the Western Austronesian languages but includes all the languages of Melanesia. They are agreed that some sort of a subgroup is constituted of Polynesian, Fijian, Rotuman and Efate, plus a few other languages spoken in Melanesia. They differ on which other languages of Melanesia should be included in this group, as well as on the subclassification of other languages of Melanesia.

The Following Abbreviations Will Be Used

AA	American Anthropologist
ACLS . . .	American Council of Learned Societies
AES-P . . .	American Ethnological Society, Publication
AL	Anthropological Linguistics
APS-P . . .	American Philosophical Society, Proceedings
APS-T . . .	American Philosophical Society, Transactions
BAE-B . . .	Bureau of American Ethnology, Bulletin
BAE-R . . .	Bureau of American Ethnology, Report
CU	Columbia University Contributions to Anthropology
IJAL	International Journal of American Linguistics
IUPAL . . .	Indiana University Publications in Anthropology and Linguistics
JAF	Journal of American Folklore
JSAP	Journal de la Société des Américanistes de Paris
Lg	Language
RCPAFL . .	Research Center Publications in Anthropology, Folklore and Linguistics
SJA	Southwestern Journal of Anthropology
SIL	Studies in Linguistics
TCLP . . .	Travaux du Cercle Linguistique de Prague
UMPL . . .	University of Michigan Publications, Linguistics
UCPAAE . .	University of California Publications in American Archaeology and Ethnology
UCPL . . .	University of California Publications in Linguistics
VFPA . . .	Viking Fund Publications in Anthropology
WDWLS . .	William Dwight Whitney Linguistic Series

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